Mastering the Master Plan at the World Heritage Site of Lumbini (Nepal): The development of an evidence-based approach to evaluate the site's economic and social impacts on local communities

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Abstract

Evidence gaps are a major challenge for cultural heritage practice and research, especially in a post-UN Agenda 2030 context where interventions and policies increasingly have to demonstrate their contributions to sustainable development. Using Lumbini Birthplace of the Lord Buddha World Heritage Site (Nepal) as a case study, this thesis therefore discusses approaches for bridging the evidence gap to monitor and evaluate more closely the social and economic impacts of heritage sites.

The site of Lumbini is an important place of pilgrimage for Buddhist communities worldwide and an important visitor attraction in Nepal, with significant social, economic and religious values for local communities. The modern development of Lumbini guided by an ambitious Master Plan has generated high expectations for local and regional development. However, the evidence for the social and economic impact of the Lumbini Master Plan, and its benefits for local communities and development, remains limited. The aim of this thesis is to document site development and assess the current evidence for its economic and social impacts on local communities. The thesis develops an analytical framework to evaluate impacts of the site development, based on 10 social and economic indicators, and review the existing evidence using a data gap analysis approach. Ultimately, it pilots a methodology to initiate gap-bridging strategies, based on rapid assessment methods.

Building on the existing evidence and the primary data collection, the thesis provides a critical review of the recorded impacts of Lumbini development on local communities and the role of heritage management and policies in shaping these impacts. The findings have several policy implications for management and development strategies in Lumbini. Moreover, in a context where the rich cultural heritage of Nepal and Asia is increasingly playing a pivotal role in development interventions, the thesis discusses possible applications of its methodology for evidence-building in South Asian and World Heritage sites management more widely.

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Note on Terminology

Unless specified, the dates used in the thesis are based on the Gregorian Calendar and Common Era. At the national level, the *Bikram Sambat* (BS) is the official calendar system in Nepal and is therefore used, sometimes alongside the Gregorian calendar date, on Nepali documentation notably official and legal documents. These dates have all been converted into the Gregorian Calendar and Common Era notation system. The notation Before the Common Era (BCE) has been used to distinguish all dates predating the Common Era (CE).

The thesis uses terminology specific to Nepal and the Indian subcontinent context, particularly related to caste and ethnic groups, religious events and rituals and metric systems. A glossary is provided below with brief definitions of key terms used. Some of the terminology is now commonly used in English or has official English translations (i.e. caste and ethnic groups listed in the National Population Census) and is therefore, not italicised in the text. By contrast, specific rituals, references to the traditional metric systems and other terms referring to different community groups in Nepal but not used in the national population census have all been italicised without, however, using diacritical marks. For instance, the terms *Madhesi* and *Pahadi* can be used to distinguish communities from the Tarai and from the Hill regions but are not used in the population census. The latter terms have therefore been italicised in the thesis. Ultimately, whenever applicable, the thesis has favoured geographical markers, Hill and Tarai, rather than the terms *Pahadi* and *Madhesi* mentioned above which have changed meaning over time and incorporate geographical, but also political and social connotations.

Glossary

Caste/Ethnic groups mentioned in the thesis

Brahmin: Highest caste in the Hindu caste system; traditionally priests or teachers.

Chhetri: Second highest caste in the Hindu caste system; traditionally associated with administrators, governor and military elites.

Dalit: considered below the four castes within the Hindu caste system, they are traditionally subject to untouchability and are therefore also referred to as Untouchables; traditionally associated with occupations linked to death, excrement, blood or dirt and considered impure.

Madhesi: Term associated with population from the Tarai lowland region.

Newar: ethnic group considered indigenous to the Kathmandu Valley.

Pahadi: Term associated with population from the Hills and Mountain regions of Nepal.

Tharu: One of the main ethnic groups considered indigenous to the Tarai region.

For the purpose of statistical analyses, the following groupings have been used:

Upper Castes: includes Brahmin and Chhetri caste groups

Marginalised Castes/Ethnic groups: includes Dalit, Tharu and Muslim groups

Other Caste/Ethnic groups: includes castes and ethnic groups in Nepal that are neither Upper Castes nor Marginalised Groups (excluding foreigners).

Metrics

Bigha: Commonly used unit of measurement in the Nepali Tarai. One Bigha represents 20 *Katha* and 6772.41 square metres

Katha: Commonly used unit of measurement in the Nepali Tarai. One *Katha* represents 338.62 square metres

Religious festivals and rituals

Buddha Jayanti: annual festival taking place in April/May celebrating the birth of the Buddha. Other commonly used names for the festival among different Buddhist communities include *Vesak* or *Buddha Purnima*.

Chaitra Mela: religious festival taking in place in the month of *Chaitra* (March/April). In Lumbini the festival is traditionally associated with the worship of a local goddess Rummindei, also known as Rupa Devi, and/or the Buddha's mother, Maya Devi.

Mundan: the first shaving of a child's hair in Hindu ritual traditions.

Prasad: ritual feast in Hindu traditions where food is offered to a deity and then shared and consumed by worshippers.

Puja: generic term for prayer rituals in Hindu traditions which are performed on different occasions, in various settings and involve a variety of practices.

Ancient Buddhist sites

Bodh Gaya: site of Gautama Buddha's enlightenment under the Bodhi tree

Devadaha: Gautama Buddha's maternal grandfather's (father of Queen Maya Devi) capital city

Kapilavastu: childhood home of Prince Siddhartha, later Gautama Buddha, and capital city of his father, King Suddhodan. The modern district of Kapilbastu has been named after the historic site.

Kushinagara: site of Gautama Buddha's final passing away

Ramagrama stupa: one of the original stupas constructed to house the corporal remains of Gautama Buddha and, based on Buddhist textual traditions, the only one that was never re-opened afterwards.

Sarnath: site of Gautama Buddha's first teaching following his enlightenment in Bodh Gaya

Acronyms

ADB	Asian Development Bank
AKF	Aga Khan Foundation
BCE	Before Common Era
CBO	Community-Based Organisation
CBS	Central Bureau of Statistics (Government of Nepal)
CE	Common Era
DoA	Department of Archaeology
GDP	Gross Domestic Product
GLA	Greater Lumbini Area
HMG	His Majesty's Government
IBS	International Buddhist Society
ICDL	International Committee for the Development of Lumbini
ICOMOS	International Council on Monuments and Sites
IFC	International Finance Corporation
IMF	Integrated Management Framework
INGO	International Non-Governmental Organisation
IUCN	International Union for Conservation of Nature
JFIT	Japanese-Funds-in-Trust
KOICA	Korean International Cooperation Agency
KTU	Kenzo Tange and URTEC
LDT	Lumbini Development Trust
LIRI	Lumbini International Research Institute
LMP	Lumbini Master Plan
LSSF	Lumbini Social Service Foundation
MCTCA	Ministry of Culture, Tourism and Civil Aviation
MDG	Millennium Development Goals
NGO	Non-Governmental Organisation
NPR	Nepali Rupees
SASEC	South Asia Subregional Economic Cooperation
SATIDP	South Asian Tourism Infrastructure Development project
SDG	Sustainable Development Goals
TRPAP	Tourism for Poverty Alleviation Programme
UN	United Nations
UNDP	United Nations Development Program
UNESCO	United Nations Education, Science and Culture Organisation
UNWTO	United Nations World Tourism Organisation
USD	US Dollar
VDC	Village Development Committee
WBG	World Bank Group
WHC	World Heritage Centre
WHS	World Heritage Site

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CHAPTER 1: INTRODUCTION

1.1. The modern development of Lumbini, birthplace of the Buddha

According to Buddhist tradition, Gautama Buddha, then Prince Siddhartha, was born in the Garden of Lumbini, in the mid-first millennium BCE, where his mother Queen Maya Devi had stopped on her journey from her husband's city, Kapilavastu, to her father's home in Devadaha (Harvey 2005: 16; UNESCO 2013: 33). In Buddhist texts, the Buddha himself identifies Lumbini as a place that his disciples could go on pilgrimage, along with three other sites: Bodh Gaya, the place of his enlightenment; Sarnath where he gave his first teaching; and Kushinagara, the place of his final passing away (Buddhist Publication Society 2010: 80-81). Archaeological and textual evidence have suggested that the sites flourished after the lifetime of the Buddha, notably in the Mauryan period (third century BCE) until the medieval period (ninth-fourteenth century CE) (Coningham et al 2019: 76). However, the locations of the four sites were forgotten in the following centuries and were archaeologically re-discovered during the colonial period through extensive explorations in India and Nepal (Allen 2001, 2011; Ray 2014). Of the four sites mentioned above, Lumbini is the only one located in modern Nepal while the other three sites are in the Indian states of Bihar and Uttar Pradesh. The Sacred Garden of Lumbini was first recognised as the Buddha's birthplace in 1896, based on the third century BCE inscription on the Asokan Pillar at the site, recording the pilgrimage of the Mauryan Emperor (Führer 1972). More recently, Lumbini was brought in the spotlight in 2013 after archaeological research provided new evidence of ritual practices in the Sacred Garden dating back to sixth century BCE (Coningham et al. 2013: 1121). These findings revived on-going discussions and debates among Buddhist scholars regarding the date of the Buddha's birth (Bechert 1995: 12-24; Coningham 1998, et al. 2019; Gombrich 2013).

Today, the Sacred Garden of Lumbini is located at the centre of Lumbini Cultural Municipality, in Rupandehi District. Part of the Tarai, lowland region, that lies between the Indian border and the Himalayan foothills, the area has been characterised by tall grassland, marshes and forests, with large areas now intensively cultivated (Gellner et al. 1997: 239). The archaeological site is owned by the Department of Archaeology (DoA) (Government of Nepal) and managed by the Lumbini Development Trust (LDT) under the Lumbini Development Act (1985). Since 1978, the development of the site and its immediate surroundings has been guided by the Lumbini Master Plan (LMP), a large-scale project covering an area of one by three miles designed by the Japanese

architect, Kenzo Tange. The LMP conceptualised the visitor experience in Lumbini, with pilgrims walking from the secular Cultural Zone through the spiritual Monastic Zone to finally enter the Sacred Zone, at the centre of which is the Asokan Pillar and the Maya Devi Temple (Figure 1.1). Within each zone the plan proposed infrastructure to accommodate pilgrims and tourists, including accommodation, areas for restaurants and shops, a museum, meditation centres and monasteries from different Buddhist traditions where pilgrims could interact with their respective monastic communities. The United Nations (UN) through its different agencies, and particularly through its Secretary-General U Thant (1961-1971), has been closely involved in the conception, preparation and implementation of the Plan. The goal of the project was to develop Lumbini as an international centre of pilgrimage and tourism "*with considerable benefits to the area around Lumbini and to Nepal as a whole*" (Joury 1969: 8).

Although the implementation was planned to be finished by 1985, it is still on-going in 2019 and criticisms have arisen regarding the management and impact of the project. On 30th April 2018, 40 years after the final design of the LMP was approved, the LDT announced its objective to complete the LMP implementation within the next two years by 2020 (Samiti 2018). Over its implementation period, the project has completely transformed the immediate surroundings of the site from clusters of small agricultural villages that had "*changed little in the last 2500 years*" (Allchin and Matsushita 1969: 10) to the recent creation of the Lumbini Cultural Municipality in 2013. The LMP has developed major infrastructure for national and international pilgrimage and tourism activities. However, many issues have been raised regarding the implementation of this large-scale project, including long delays in the completion of the plan and the lower-than-expected economic and social returns from pilgrimage and tourism activities for the people of Lumbini and the surrounding areas (Molesworth and Müller-Böker 2005; Rai 2006; Nyaupane 2009). While the LMP has provided a vision for the physical planning aspect, the site is still lacking an integrated management process that links the development of the site with its wider region and stakeholders (Weise 2013). As the infrastructure development phase is in its final stages, it is generally agreed that the LMP has yet to fulfil its promise, particularly in delivering lasting benefits to local populations (IFC 2012; UNESCO 2013).

In 1997, the core archaeological site was listed as a UNESCO World Heritage property but, despite the ambitions of the LMP and the World Heritage listing, visitor numbers did not increase significantly until the early 2000s (WHC 1997: 46; Giri 2013). Since 2002, and particularly following the end of the Maoist Insurrection in 2006 (Kergoat 2007), there has been a constant increase in international visitor numbers in Lumbini, with annual figures rising from 9,000 to over 145,000 foreign visitors in 2017, with a total number of domestic and foreign

visitors estimated to just over 1.5 million in 2017 (MCTCA 2018, 80; 86). As the birthplace of the Buddha, Lumbini has become a growing place of pilgrimage for the international Buddhist community and an important tourist attraction in Nepal. With increasing visitor numbers, the potential for further growth in the coming years is significant, especially if effective management strategies and practices are put in place to fully reap the benefits of the site. Its World Heritage status already provides a highly visible recognition of its Outstanding Universal Value for the international community as a whole. Moreover, for the diverse ethnic and religious communities living in the Municipality and in surrounding areas, including large Muslim and Hindu populations as well as indigenous groups, the site plays various roles within local religious, social and/or economic activities.

However, several surveys of local residents conducted over the past decade, including as part of this thesis, have indicated that the development of the site has raised mixed feelings among these local populations (Pandey 2007; Dhakal 2011). While some consider that they have gained from the World Heritage Site (WHS) development, others, especially families that used to live within the area of the LMP, feel that so far they have not gained any benefit or even become poorer due to their relocation (Acharya 2012; Molesworth and Müller-Böker 2005). Overall, it is still "*unclear whether local people have ultimately gained or lost from the expansion of the WHS*" (Pandey 2007: 17). The focus of national and international research has tended to be on archaeological investigations while reviews of the LMP implementation and holistic evaluation of its social and economic impact on local communities have not been conducted.

1.2. Research question, aims and objectives of the thesis and research approach

Since the late 1980s and 1990s, there has been increasing interest among different stakeholders, including heritage professionals and researchers, policymakers, and the international community in understanding the wider social and economic values and impacts of heritage. This increased attention has led to the development of new theories and hypotheses on the strong links between culture, heritage, tourism and social and economic development (Nurse 2006; Cousin 2008; Pereira-Roders and Von Oers 2011; ICOMOS 2011; UCLG 2004). Heritage-related projects have been defined as having a wide range of impacts including on economic and employment opportunities in various sectors, but also on education, civic pride, identity building and sense of place, capacity-building, community building or health and wellbeing, at different (local, regional, national) levels (CHCfE 2015; Dumcke and Gnedovsky 2013; El Beyrouthi and Tessler 2013; UNESCO and OVPM 2012; Rebanks 2009). However, the understanding of the nature of the social and economic impacts of heritage and their measurement remains limited (OECD 2007a, 2007b, 2009; Rizzo and Mignosa 2013). The need for further research to be

conducted to identify best practices in the development and management of these sites to maximise the benefits and mitigate any adverse consequences has been noted (Waterton and Watson 2011; Chirikure et al. 2010).

There are many challenges to measure accurately and evaluate the social and economic impacts of heritage, particularly in places like Lumbini and Nepal where the development of information systems has only accelerated recently. The challenges for on-going research are partly methodological. Social impact evaluations are, for example, still in most cases based on qualitative information (Dumcke and Gnedovsky 2013). By contrast, economic impact assessments have often been criticised for inflating the economic impact, notably by failing to consider negative impacts or costs of heritage projects (Getty Conservation Institute 1998; WBG 2015a: 5-7). Linked to these issues, the lack of data to support quantitative assessments is also a major challenge and restrains methodological options and/or the quality of assessments (UNESCO Institute of Statistics 2012; Deloumeaux 2013; Nypan 2015). Considering the range of impacts that have been associated with heritage, the data collected by heritage practitioners or policymakers is generally not sufficient to grasp the full extent of both positive and negative impacts. The use of other data systems and sources, including censuses, administrative data or surveys, is necessary but also comes with a number of challenges. The data that would ideally be required for cultural/heritage statistics analysis is not always available from these sources and comparability is also an important issue "*due to discrepancy in the content of each [cultural or heritage] category, differences in definitions and a lack of homogeneity in years available for different data among and within countries*" (Deloumeaux 2013: 190).

Data availability, accessibility and reliability has indeed been a major challenge in the early phases of the research in Lumbini (see discussion in Section 4.4.4). The thesis originally proposed to conduct a longitudinal evaluation of the social and economic impact of the implementation of the LMP since 1978 on local communities, based on a set of social and economic indicators within a broad evaluation framework. However, preliminary research undertaken in Lumbini between February and March 2017 to identify data systems and sources and assess the availability, accessibility and reliability of existing information for the period of the study (1978-present) began to pinpoint major gaps in the existing data. Social and economic data at the local level for the period of study (1970-present) was scarce and dispersed among different local, regional and national offices and organisations making access difficult but also inducing important gaps in the datasets that were available including incomplete coverage and poor comparability of data across different sources. The gaps affected both data on the evolution of the local tourism industry, including business creation, employment and generated income, and

local socio-economic development in the former Village Development Committees (VDCs), now included within the Lumbini Cultural Municipality. While the data gaps identified have reduced over time, with more data available since the late 2000s compared to the earlier phases of the LMP's implementation, there are still important limitations in the current datasets. These gaps have an impact on the ability to measure effectively the social and economic impact of the site development and the associated tourism industry.

The limited results of this initial data collection were partly caused by the nature of the management system and procedures in Lumbini, including the limited interaction and coordination between site managers, who answer directly to the Ministry of Culture, Tourism and Civil Aviation (MCTCA), and the different regional and local actors, including local and district administration offices and development partners (Chapter 3). These issues, however, were also linked to broader national data management challenges related to Nepal's recent political, legal, administrative, economic and social history (Chapter 2). Since the 1950s, the country has gone through several phases of political transition and instability, with frequent changes in the constitution and governments, and a decade-long internal conflict between 1996 and 2006 (Whelpton 2005; Kergoat 206; Gellner and Hacchethu 2008). Regular political and civil unrests still affect public life, notably since "*the abrupt promulgation of the long-awaited Constitution of Nepal in 2015*" (Dennison and Rana 2017: 5). As a result of this political context, the quick succession of administrations has made traceability of data challenging. Moreover, policies to improve government transparency, public accountability and governance have only begun to be considered and "*formalised practices of downward government accountability, supported by transparency and access to data and information, are also just developing*" (ibid.: 6), under the new constitution and the impulse provided by the UN 2030 Agenda for Sustainable Development (UN 2015a).

As mentioned previously, gaps in cultural and heritage data are a challenge that is not restricted to Lumbini or Nepal but is a shared issue within the wider heritage sector and limit the potential for statistical analysis to inform policies and the current understanding of its social and economic impact (Chapter 4). In her review of the current state of cultural heritage data, Deloumeaux (2013: 201) summarised:

"Available quantitative data on heritage are not exhaustive. […] The data are simply not consistent enough or complete to address policy issue. They need to be supported by qualitative data which are still scarce for heritage. Therefore, heritage statistics require adequate instruments such as household surveys, which are human and financially demanding. At micro-

level, cultural heritage requires site specific data in order to address policy needs and management issues".

While Deloumeaux's review focused mainly on OECD countries, developing countries have additional challenges in using administrative data for heritage or cultural statistical analysis. These notably relate to the lack of resources, enforcement issues, including for collecting reliable data on businesses' income for taxation purposes, storage, access and comparability of data across different national and international offices, ministries and public agencies (ADB 2010, 2006; NPC 2017: 54-5).

Research on how to optimise and adapt international and national data for heritage and cultural statistical analyses has been on-going (Chapter 4), aiming "*to increase the availability of cultural statistics, and to improve the quality and comparability of the data*" (Deloumeaux 2013: 190) by setting standard definitions and common international indicators. Among the organisations and institutions leading these initiatives are UNESCO (UNESCO Institute of Statistics 2012; UNESCO 2014), UN (UNCTAD 2010), European organisations (Eurostat, Council of Europe, European Commission), MERCOSUR in Latin America and its Cultural Information Systems. However, these have not addressed the data gap on individual sites which currently limit the use of statistical analysis to inform management and policies at the micro-level. This thesis has thus approached this issue at a case study level applying a step-by-step data gap analysis to review data available for policymakers, planners and managers to evaluate the social and economic impact of Lumbini heritage site and identify data collection methods which would enable the existing gaps to be addressed and to inform decision and management processes.

With the near completion of the LMP, the management of Lumbini is reaching a transitional phase that offers opportunities to redefine the objectives of the site development and to adapt future management plans, including monitoring and evaluation strategies, to achieve sustainable development for both the local heritage and local populations. Therefore, this thesis aims to review the development of Lumbini since the preparation of the LMP, assess the evidence for its economic and social impacts on local communities and develop a methodology to bridge the evidence gaps. The thesis has five main aims:

1) Review the social and economic development objectives of the LMP in its conception and preparation phases from the late 1960s until 1978;
2) Discuss the implementation phase of the LMP, between 1978 until present, in light of the social and economic objectives formulated in the conception and preparation phases;

3) Develop an analytical framework to evaluate the existing evidence for the social and economic impact of the site development. Based on this initial assessment, identify the main data gaps which would need to be filled to fully capture the socio-economic impacts of the LMP on local communities and develop a methodology to bridge the gaps;
4) Present the results of new primary data collected in Lumbini in 2017-2018, as a first step aiming at bridging some of the data gaps and strengthening the knowledge base for more data-informed policymaking in Lumbini;
5) Discuss the implications and limitations of the results and the methodology, in the process of evidence-building in Lumbini and consider possible applications in heritage management and practice at other South Asian and World Heritage sites.

1.3. Methodological approach

The thesis analysis is founded on a conceptual framework, with 10 economic and social indicators: 1) Visitor expenditures, 2) Business creation, 3) Income generated by the tourism sector, 4) Government and private sector funding and local tax revenues, 5) Total employment, 6) Livelihood opportunities for women 7) Income poverty reduction, among marginalised groups 8) Education, 9) Public Infrastructure and 10) Cultural and religious participation (Chapter 4). The choice of indicators has been informed by a comparative analysis of methodologies used in previous studies (see Section 4.2). However, the analytical framework and the set of indicators chosen have been restricted by existing limitations in the national data systems in Nepal and data availability for the time-period covered (see Section 4.3). Some widely recognised impacts were, therefore, not integrated in the framework because of the unavailability of the data in national data systems or in Lumbini until recently. For instance, although the thesis discusses the growing concerns over rapidly increasing pollution and environmental threats, there is no environmental impact indicator in the framework due to the lack of data for most of the time period covered (1970-present) to monitor change. Due to these limitation, other indicators, notably some of the social indicators, have been very closely aligned with the LMP development objectives for which data is available. With on-going developments in data systems in Nepal, there will be new possibilities to monitor and evaluate, at the local level, the broader impacts of on-going developments at or near the site, notably social and environmental impacts. The framework is thus intended to maintain a level of flexibility to adapt the impact evaluation and indicators to changing contexts, including data availability but also development objectives. The thesis' discussion (Chapter 6) reflects on the challenges related to the scope of the social and economic impact evaluation in a heritage context.

This thesis uses a data gap analysis approach to evaluate the existing evidence for evaluating the social and economic impacts of the LMP since 1978, based on the indicators of the framework (Chapter 4). Data gap analysis is an approach to data evaluation based on comparing an inventory of the data required to measure indicators with an inventory of the data currently available, considering its accessibility and reliability, in order to identify the evidence gaps and propose a strategy to meet them (Aalders and Stanik 2016; Jennings 2000; Ariño et al. 2016; AHMS 2015). The data gap analysis approach has been used for environmental conservation, to identify gaps in the inventory and monitoring of natural assets (Ariño et al. 2016; Aalders and Stanik 2016). The approach is also commonly found in the documentation prepared for the development of indicators to monitor and evaluate the Sustainable Development Goals (SDG) implementation (Government of the People's Republic of Bangladesh Planning Commission 2015; Government of Pakistan 2017; ONS 2018). However, it has not often been used in heritage and tourism research (AHMS 2015), and there is no previous example applying this process to assess the evidence for monitoring and evaluating the social and economic impacts of heritage activities.

A review of the current understanding of the social and economic objectives and impacts of the LMP has been initially conducted based on existing information, including secondary data but also qualitative data collected through interviews with stakeholders and individuals involved in the project conception and implementation phases. The analysis has contextualised the different phases of conception, preparation and implementation of the LMP, focusing on political, social and economic factors, at multiple levels, which have influenced the definition of social and economic objectives but also their planning, implementation and impact at the local level (Chapter 2). Furthermore, this review has considered the limitations in existing data and sources and key questions/areas where information remained insufficient to monitor and evaluate social and economic impacts of site development. The analysis has also discussed recent trends in tourism and heritage-related development in Lumbini and what measures have been taken to monitor and evaluate the social and economic impacts of on-going or forthcoming developments (Chapter 3).

Following this initial review, the research has been concerned with meeting some of the data gaps identified and developing tools to monitor and evaluate current social and economic impacts in Lumbini (Chapter 4). The process has followed a step-by-step approach, starting with the definition of questions that 1) ought to be addressed in order to understand better the impacts of site development and 2) could be effectively evaluated by collecting additional primary data combined with existing secondary data. The next step has been to develop an

approach to answer these questions using different appraisal methods, including quantitative data but also qualitative information to provide both measurable impacts and further insights into the processes of change (see Section 4.5).

The data collection took place over several phases, starting with the scoping research undertaken in January-March 2017 (Chapter 5). The data collection phases coincided with Durham University's UNESCO Chair's field seasons at the nearby archaeological site of Tilaurakot-Kapilavastu, as part of the international project *Strengthening the Conservation and Management of Lumbini, birthplace of the Lord Buddha, World Heritage Property (Phase 2)*, funded by the Japanese Funds-in-Trust to UNESCO (UNESCO/JFIT). The development of the methodological approach has thus benefited from, but also informed, the project's research activity on monitoring and evaluating local impacts of early development at Tilaurakot-Kapilavastu. Different data collection methods were tested, including visitor, household and business surveys to collect quantitative data on the impact of tourism and the participation and benefits gained by local communities, but also qualitative information from key informant interviews, focus groups and direct observation to refine the analysis of the results and the factors affecting social and economic impacts. Overall, 77 interviews and focus groups have been conducted with local stakeholders and over 1,500 visitors and over 100 businesses surveyed. Ultimately, the results of the data collection methods have been analysed (Chapter 5) and the outcomes of the process and the methodology discussed (Chapter 6), including whether it has successfully addressed the data gap identified, its limitations and possible adaptation or future use in monitoring and evaluating social and economic impact of heritage in Lumbini, but also at other sites in Nepal and South Asia.

1.4. Significance of the research

This research comes at the junction of multiple fields which have been the focus of attention from different international, national and sector-specific stakeholders. It is closely linked to discussions on the social and economic role of culture and heritage, since the 1980s (Labadi 2008; Licciardi and Amirtahmasebi 2011; Rizzo and Mignosa 2013; Greffe and Pflieger 2005). The economic and social impact of tourism, especially international tourism, is also widely discussed in the academic literature and a contested issue among the different actors and stakeholders (UNWTO 2015; Timothy and Nyaupane 2009; Sharpley and Telfer 2015).

This attention to impact evaluation and monitoring has, in many cases, accelerated with the transition from the former Millennium Development Goals (MDG) to the new UN 2030 Agenda and the SDGs (UN 2015a, 2015b; Hosagrahar et al. 2016). One of these fields of research is

related to monitoring, evaluation and reporting processes in international, national and local development policies and interventions (UNDP 2009; UNEG 2016), as "*The MDG monitoring experience has clearly demonstrated that effective use of data can help to galvanize development efforts, implement successful targeted interventions, track performance and improve accountability*" (UN 2015b). Following the UN 2030 agenda, a series of publications have reviewed the current 'state-of-affairs', including in South Asian countries, to develop efficient and comparable indicator framework, monitoring and evaluation procedures to assess how policies are addressing the 17 SDGs (Leadership Council of the Sustainable Development Solutions Network 2015; NPC 2017; Government of the People's Republic of Bangladesh Planning Commission 2015). UNESCO and other cultural and heritage researchers and practitioners have used this momentum to develop, in parallel, programmes on the evaluation of the impact of culture and heritage as "*drivers and enablers of development*" in our modern societies (UNESCO 2012: 3; see also UNESCO 2014; Hosagrahar et al. 2016).

Considering the wide range of recognised social and economic impacts that heritage and culture have on society, data gaps inevitably occur and limit the possibilities to evaluate its social and economic impact and understand how it induces change. In South Asia particularly, where heritage-based development projects have been increasing in numbers but also where the use of administrative and public data for statistical purposes can be problematic, the lack of data is thus a critical issue. Using data gap analysis approaches can help tailoring data collection to evaluate impacts of heritage and tourism projects on selected questions and assess whether they successfully fulfil their objectives. Moreover, the objective is also to guide evidence building and progressively improve datasets to refine the evaluation and assessments in the long-term. This thesis provides a methodology to approach monitoring and evaluation, from this critical first stage of assessing what data and information is available, to developing a strategy for dealing with missing data and developing data collection methods that are targeted to the objectives of the site development.

Lumbini is a particularly informative case study to develop this approach and address these questions. The development of Lumbini has attracted major financial and technical assistance from the main international development agencies working in South Asia, including UN, UN Development Program (UNDP), World Bank Group (WBG) and Asian Development Bank (ADB), without, however, providing clear evidence of its social and economic impacts. The site is also at a turning point in its development, the LMP being in its final implementation stages, with construction work still on-going in the project area, while new regional developments are already underway, including the new upgrade of the Bhairahawa Airport into an international

airport and upgrading of the original two-lane road between Bhairahawa-Lumbini-Kapilavastu into a four-lane highway. The region is also rich in ancient archaeological sites and the development of infrastructure around these places has already begun. These activities have started to be associated with negative impacts on the preservation of these sites but also on local communities (Coningham et al. 2017; Rupakheti et al. 2017; Mori et al. 2015). This second phase of infrastructure development has again been funded mainly through ADB loans as part of the South Asian Tourism Infrastructure Development project (SATIDP) (ADB 2018a, 2018b), and/or as part of the WBG/International Finance Corporation (IFC) project 'Development of the Buddhist Circuit Strategy' (IFC 2013). None of them, however, provide requirements or method to monitor and evaluate the wider economic and social impacts of their project's implementation.

This thesis therefore provides the first comprehensive review of the evidence for the social and economic impact of the site development locally. The research has compiled, for the first time, data and information from a wide range of sources to assess the recorded impacts of the site development but also define the gaps in the existing evidence. As part of the gap-closing strategy developed from this evaluation, the thesis has collected original, primary data, combining large-scale surveys with key informant interviews and focus groups. The latter is currently the most complete dataset on visitors, their contribution to the local economy and the local tourism sector in Lumbini. Qualitative information collected through stakeholders and scoping interviews in the surrounding villages complemented and informed the design of these surveys but also the interpretation of the results. By combining this new data and information from interviews with a review of the long-term site development and management until present, the research offers a reflection on the role of planning and management at different levels in generating or limiting economic and social benefits.

Lumbini forms a precedent for any development project in the Western Tarai region and understanding its achievements and limits should inform the future development of the World Heritage property but also of other local heritage sites. By evaluating the outcomes of previous policies and projects at the Lumbini WHS, using existing data and other sources, the conclusion of this thesis thus provides new insights that can inform future phases of development in Lumbini and its wider region, including on the nature of benefits that can be encouraged and negative impacts that need to be mitigated. Moreover, the strategy for data collection and for meeting the current evidence gap developed in this thesis can also be used to monitor and evaluate impacts of on-going and forthcoming projects in Lumbini and other nearby sites but

also adapted to inform wider heritage policies and the management and development of other South Asian sites.

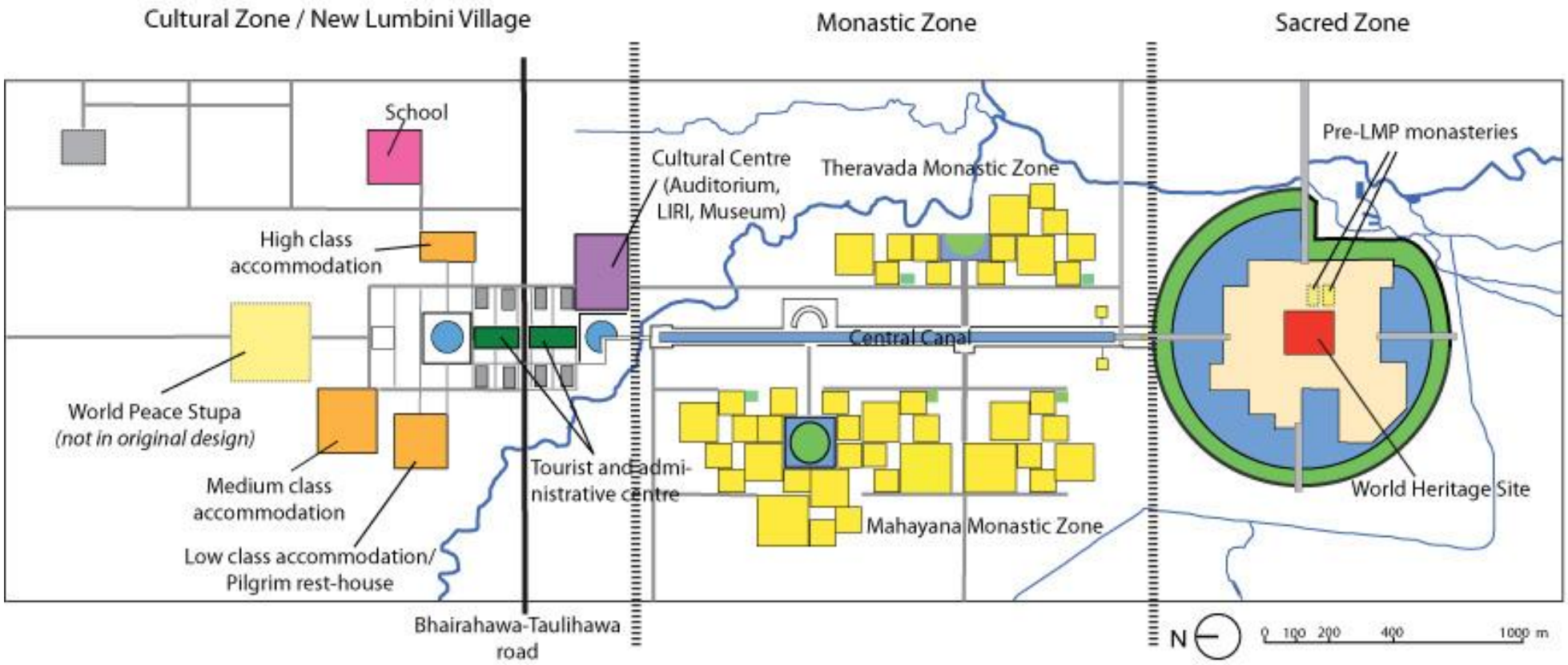
1.5. Thesis structure

The structure of the thesis closely follows the five objectives identified previously. Chapter 2 focuses on the conception and preparation phases of the LMP, reviewing the objectives of the site development, and how they were transcribed in the 1978 final design (Objective 1). It contextualises this process within the changing international, national and local context of the 1960s-70s onwards, highlighting how the plan and the development objectives were closely influenced by both international development theories and international agencies' practices of the time and new national political, economic and social national context in Nepal. Chapter 3 reviews the phases of implementation of the LMP and the development of tourism and pilgrimage at the site, discussing how the social and economic objectives formulated in the conception and preparation phases have been implemented from 1978 until present (Objective 2).

Chapter 4 addresses the current gaps in the data regarding tourism and pilgrimage activities in Lumbini. It introduces the analytical framework, developed based on a review of existing frameworks and evaluation methods, and applies a data gap analysis approach to evaluate the current evidence for the social and economic impact of the LMP on local communities (Objective 3). Based on this assessment, the chapter moves on to introduce the data collection methodology developed to initiate a gap-closing strategy. The methodology combines surveys of visitors, tourism businesses and communities, to collect quantitative data for specific social and economic indicators, with key informant interviews, focus groups and on-site observation to provide qualitative information. Chapter 5 then presents the results of the data collection (Objective 4), providing an overview of the current nature of tourism and pilgrimage activities and its supply chain. More particularly, the results focus on the distribution of benefits from current activities among population and community groups and discuss the factors that have been identified as encouraging or limiting benefits for different groups and communities. Ultimately, Chapter 6 discusses the findings of this evaluation, focusing on both their implications for future development plans but also on possible applications, or adaptations, of the framework for other cultural and religious heritage sites across South Asia (Objective 5).

Figure 1.1: Lumbini Master Plan Final Outline as approved by the UN and the Government of Nepal

(Source: Author, adapted from UNDP and UNESCO 2013: 33 and KTU 1978)



CHAPTER 2: THE CONCEPTION AND PREPARATION OF THE LUMBINI MASTER PLAN

2.1. Introduction

This chapter contextualises the conception and preparation of the LMP from the late 1960s, focusing on how the political, economic and social context and the various actors involved shaped the definition of the social and economic objectives of the project and how they were integrated within the final design in 1978. The first section focuses on international stakeholders, mainly the interest and the role of the UN and other governmental agencies but also regional geopolitics and the international Buddhist community. The second section reviews the changing political, economic and social context within Nepal and in the Tarai region, and how the LMP project and its economic and social objectives has affected, but also been affected by, these changing dynamics. Finally, the third section reviews the final design of the LMP of 1978, which is still today the main document for the site development and discusses how the social and economic objectives and the multiple voices have been translated in the physical planning provided by the LMP.

2.2. The international context and interests in Lumbini

2.2.1. The Lumbini Master Plan and development theories and practices in the 1960s-1980s

The turning point for the development of Lumbini is usually considered to be the visit of U Thant, then UN Secretary-General, in 1967. A devout Buddhist, he initiated discussions with the Government of Nepal on how best to develop Lumbini and provided direct and indirect support to the project throughout his time in office. As a result of his support, and at the invitation of the Government of Nepal, several UN offices were involved in the early stages of the conception of a development plan for the site of Lumbini, including the UN itself but also UNESCO and the UNDP, each sending missions to Lumbini between 1967 and 1969 to advise the Government of Nepal and inform future plans (UNESCO 2013: 57-60). Another early actor was ADB which funded in the 1970s the construction of the tarmac road connecting Bhairahawa, Lumbini and Taulihawa and the upgrading of the local Bhairahawa Airport.

Beyond the personal interest of U Thant, the 1960s were a period during which the number of international organisations' interventions in Nepal increased rapidly and "*the flow of aid into Nepal swelled from a trickle into a torrent*" (Sharma 2017: 58). It followed the end of the Rana regime (1846-1951) in 1951, after a popular rebellion supported by King Tribhuvan (1951-1955)

(Whelpton 2005: 71-2; Hutt 2004: 3). This event marked a turning point in the political, economic and social history of Nepal, as the newly empowered King led the country into a phase of political democratisation, initiated large scale social and economic reforms, especially in the traditional agricultural sector, and reopened the borders which had been kept under strict control under the previous regime (Bhooshan 1979: 61; Regmi 1976; Whelpton 2005: 123-153). As Nepal has never been colonised and had been kept under strict isolation from foreign influence under the Ranas, the post-1951 era was the first time that the country entered the international market and international organisations and foreign aid made their way into Nepal (Thompson, Gyawali and Verweij 2017: 8; Karkee and Comfort 2016; Bhattarai 2005).

Starting with the USA and India, from 1951 onwards, inter-governmental organisations, state-led aid and international non-governmental organisations flooded Nepal with projects, expert missions, technical advice and support for the development of the country (Sharma 2017; Whelpton 2005; Panday 2012). Nepal became a member of UNESCO in 1953 and of the UN in 1955. Before then, the UN was already involved through the World Health Organisation in a malaria eradication programme (UNWHO 1954). The Nepal Government also benefited from contemporary geopolitical rivalries between India/China and USA-West/USSR to attract foreign donors to support its development plans (Adhikari 2012; Bhattarai 2005: 70). In the 1970s, international development banks, mainly ADB and WBG began to fund different types of large-scale projects while UNDP and the Food and Agriculture Organisation focused on natural resource management (Sharma 2017: 61). By the late 1970s, most major inter-governmental organisations and many non-governmental organisations (NGOs) had assistance programmes running in Nepal, many of them having areas of overlap. The main focus of international assistance was on agriculture and forestry, transportation, industry, energy (notably hydroelectricity), communication, water management and education (Karkee and Comfort 2016, Bhattarai 2005: 65-6).

The 1972 national tourism master plan was also prepared with the Federal Republic of Germany's assistance while master plans for individual destinations (Kathmandu Valley, Pokhara, Lumbini) were assisted and sponsored by multiple donors, including UNESCO, UNDP and individual Western and Asian countries (Chapagain 2008). Nepal is still today heavily dependent on foreign aid and the Government "*has to take donor preferences and expectations into consideration and cannot act entirely on its own*" (Sharma 2017: 54). In this context, coordination between different funding agencies is critical, including for minimising overlaps but also ensuring cohesion in national policies and projects funded by different donors, in the

objectives, policies and implementations of different components of regional and national development plans.

As an UN-initiated project, funded for the most part by international contributions, the LMP is an example of such projects that were strongly influenced by the interest and activities of different donors. While U Thant had a personal and religious interest in the project, the early UN missions envisioned a wider regional project where Lumbini would be the central element of a regional development plan, recommending that:

"*a basic regional master plan be prepared for the integrated development of the whole complex of sacred places and servicing areas embracing Kapilvastu, Lumbini and Bhairahawa identifying:*

a) *Rural development problems […]*
b) *The area of archaeological excavations, past and future, the sites for guest houses, hotels, a museum, temples, pilgrims' quarters, a hospital, government offices, motor service stations, power stations, telephone exchange, location of wells, sewers and drains and everything else that go to make up an integrated small town at Lumbini […]*" (Kobe et al. 1968: 1)

The 1968 UNESCO mission also considered Lumbini development as a tourism-based regional development project, linking the city of Bhairahawa, officially renamed Siddharthanagar

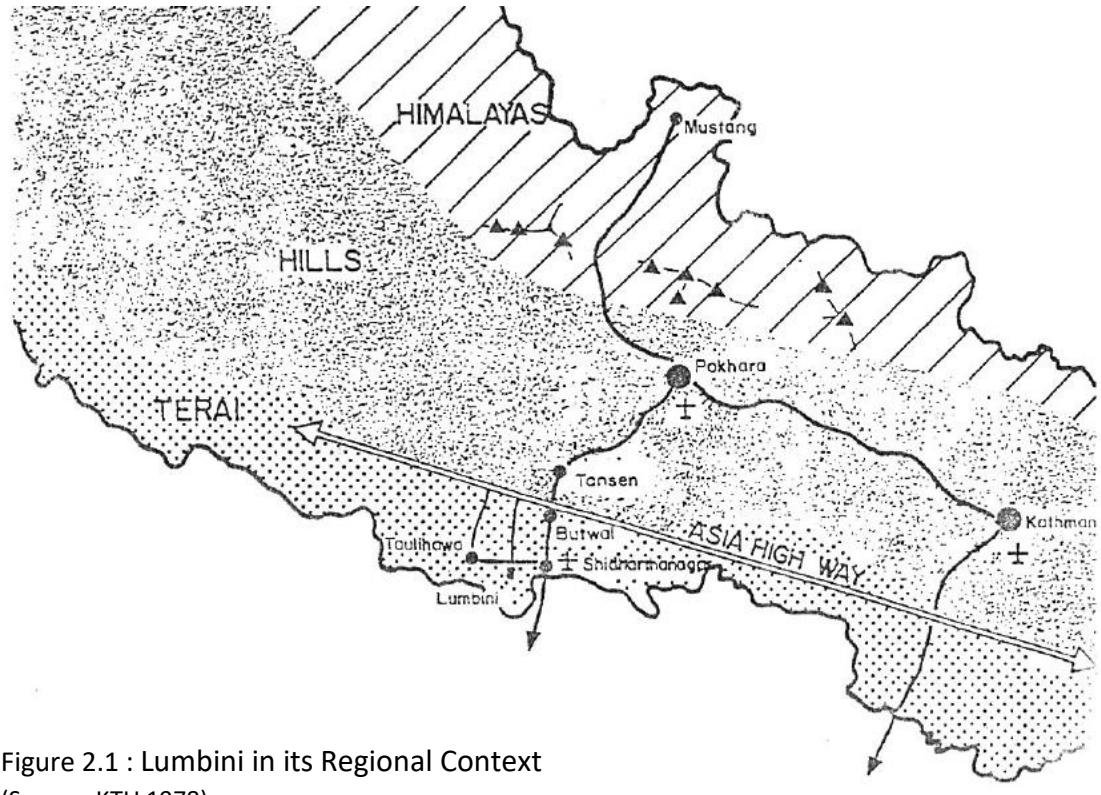


Figure 2.1 : Lumbini in its Regional Context
(Source: KTU 1978)

Municipality, with local pilgrimage sites and tourist attractions, including Lumbini but also Tilaurakot-Kapilavastu, regarded in Nepal as the childhood home of the Buddha (Pollaco 1968: appendix 1; Figure 2.1). In the same year, funding applications were made in that sense, notably to UNDP to develop this regional plan (HMG 1968). Most of the regional components recommended by the first UN mission were, however, rejected by 1969 (Joury 1969). One of the main objections was that the project would overlap with other on-going missions by the Food and Agriculture Organisation and International Bank for Reconstruction and Development but also with the Federal Republic of Germany's work in the broader Lumbini and Gandaki regions (ibid.). Considering these concerns, the UN decided to limit its intervention to the immediate surrounding of Lumbini, emphasizing the importance of linking it with the other development plans and projects in the region. Nonetheless, as the last section of this chapter discusses in more detail, coordination between all these different projects was lacking in both the conception and preparation phases but also later in the LMP implementation.

2.2.2. The Lumbini Master Plan, tourism planning and international development in the 1960s-1980s

The conception of the LMP also took place in a specific context and changing international development policies and practices. In the 1960s and 1970s, international tourism was seen as one of the main sources of technology transfer and wealth redistribution between developed and developing countries, through foreign exchange and attraction of development capital (Harrison 2015; Telfer 2015; Cousin 2008). Building on Rostow's (1960) *Stages of Economic Growth*, Kurt Krapf (1961, 1963), the first appointed World Bank tourism expert, theorised that the rise of international tourism, characterised mainly by the travel of people from developed countries to developing countries, generated an almost automatic process of wealth redistribution making tourism an effective tool to propel economic development in poorer countries. He argued that international tourism particularly builds on and valorises the primary resources of these countries including climate, natural resources and heritage: "*sans la venue des touristes étrangers, toutes ces richesses resteraient en friche, elles ne pourraient être exploitées économiquement et le pays manquerait une occasion unique de s'aider lui-même*" (Krapf 1961: 881). In this approach to international tourism, the focus is on developing countries competing to attract mass tourism, notably through the development of infrastructure, including transportation, tourism businesses, energy and water, hospitals, etc. Ultimately, foreign currency and the development of infrastructure would automatically provide local populations with social and economic benefits.

Krapf's arguments reflect more broadly development theory and practice of international organisations in the 1960s-70s which put a strong emphasis on the development of large-scale infrastructure projects in order to build the physical basis required for economic development (Verweij 2017: 13; Rostow 1960). This included road construction, airport upgrading, hydroelectricity infrastructure, water supply, schools, all heavily funded in Nepal since the 1950s as discussed previously. In the tourism sector, for instance, the 24 World Bank projects in the 1960s-1970s included "*several components, but 13 were primarily concerned with infrastructure, five with construction or rehabilitation of superstructures, five with lines of credit to intermediaries for financing hotel investments and one with hotel training*" (Davis and Simmons 1982: 212). The development of Lumbini is representative of this period. The 1968 UNESCO mission recommendations for Lumbini, although never implemented, are an example of the type of tourism projects that were commonly implemented in developing countries at the time as part of tourism-based development policies. The UNESCO mission advised the development of the following components:

a) "*Bhairahawa, including Bhairahawa Airport*
b) *The sacred site of Lumbini, including Lumbini village*
c) *An area of approximately 300 acres for the construction of a pilgrims' village two miles north of Lumbini and the proposed Bhairahawa-Taulihawa road*
d) *An area of approximately 200 acres, eight miles to the north of Lumbini, for the construction of the proposed tourism complex*
e) *Taulihawa*
f) *The archaeological site of Ramghat [Tilaurakot], the ancient capital of Kapilavastu*" (Pollaco 1968: Appendix B, p 2)

The tourism complex (component d) that the mission recommended was designed to eventually diversify the visitor market in Lumbini and attract higher-income tourists, and not solely pilgrims. To reach this objective, the complex should include a variety of facilities, including restaurants, bars, shopping arcades and bungalow-type hotels with all modern amenities, but also provide for recreational and sporting activities, including in the long-term the creation of a golf course (Pollaco 1968: appendix 1b, p16-7). This proposal mirrors the large resort projects funded by the World Bank in the late 1960s-70s, in Zihuatanejo-Ixtapa (Mexico) or in Tunisia (Davis and Simmons 1982) but also more broadly the tourism strategies promoted in most developing and developed countries in the 1960s, with large and 'all-inclusive' holiday resorts, like the French Club Med (de Kadt 1979: 6-7; Butler 1980; Cousin 2008). While these recommendations were never implemented, the final design of the LMP completed in 1978 was

representative of the international mind-set and tourism planning practice of the 1960s-1970s, in that it focused primarily on the physical infrastructure to facilitate access, provide facilities for pilgrims and respond to physical threats to the protection of the archaeological remains. It was then assumed that these activities and outputs would automatically provide positive outcomes and social and economic impacts to local communities, although some potential negative impacts were mentioned by the design team which will be discussed in Section 2.4 (KTU 1972: 6).

By the late 1970s, this infrastructure-focused approach had begun to be criticised for several reasons (Telfer 2015; Equations 2008; de Kadt 1979). Return on investment and the employment created by these large tourism projects and holiday resorts was often lower than expected, notably due to leakages in the local economy (de Kadt 1979: 9; Britton 1982: 334). The review of the World Bank tourism projects by Davis and Simmons in 1982 mentions problems and delays linked to land acquisitions and to political and economic instabilities throughout the implementation of these projects which affected their return on investment. The uncontrolled increase in visitor numbers and infrastructure development in many cases damaged the landscapes or heritage sites that were the reasons for people's visits (Timothy 2015: 237). The lack of consultation and the impacts of these projects on local communities also began to be particularly criticised, especially in the context of Nepal (de Kadt 1979: 9-15; Nepal 2000; Chapagain 2008). The land acquisition processes for the construction of the large-scale infrastructure or the creation of protected areas, like Chitwan or Lumbini, raised human rights concerns and have had in many cases negative impacts on indigenous populations and resident communities (Gyawali et al. 2017; Molesworth and Müller-Böker 2005; McLean 1999). Moreover, the centralisation process has led to custodianship of protected areas being taken over by the central Government or private interests at the expense of the traditional custodians, with negative impacts for both local communities but also for the protection of these areas (Chapagain 2008; Owens 2002; Maharjan 2012).

Chitwan National Park, geographically close to Lumbini and a World Heritage Site (WHS), is a good example of a site that has gone through this centralisation process but has been undergoing a process of change in its management processes towards community-based approaches, including both community participation but also consideration for wider economic and social benefits (Suwal 2019; McLean 1999; Spiteri and Nepal 2008; Bhandari 2012; Joshi 2013). The land acquisition process in Chitwan finds several parallels with the LMP implementation. When the park was created in 1973 and later extended in 1977, populations were moved out of the protected area, with significant negative impacts on local communities,

including loss of access to natural resources (thatch, timber, firewood, etc.) and pasture lands, households left landless and increased poverty (McLean 1999: 40; Nepal and Weber 1994; Spiteri and Nepal 2008). Local residents also reported conflicts with the military mobilised to remove residents from their homes (McLean 1999: 40-1). Ultimately, the development of fauna within the park generated new threats to crops and people from wildlife (Nepal and Weber 1995). Needs and resentments led to the violation of the regulations in the protected area, including local residents getting involved in illegal activities such as poaching, logging and hunting (Nepal and Weber 1994: 333). The management and regulations in the Park were also unable in most cases to control the deforestation process (ibid.).

Many of these issues find echoes in Lumbini's development as illustrated by the following chapter (Section 3.3.2-3). However, in contrast with Lumbini, the management of Chitwan has been moving towards further participation of communities but also towards policies that encourage social and economic benefits for local communities. The buffer zone has played a particularly important role in this transition offering a space to provide concessions for a number of tourism businesses, but also to introduce community-managed forests (Suwal 2019: 126-127). While there are still some issues and tensions, including between site managers, communities and concessionaries and other businesses outside the Park (Bhandari 2012: 235-6), these policies have already shown positive results on forest conservation and increased local engagement and benefits for local communities (Spiteri and Nepal 2008; Joshi 2013).

2.2.3. Current shifts in international development theory and practice and the Lumbini Master Plan

Many authors argue that today development theory and practice is at a turning point as previous approaches have failed to fulfil their objectives of economic development in less developed countries, "*to eradicate extreme poverty and hunger; achieve universal primary education; promote gender equality and empower women; reduce child mortality; improve maternal health; combat HIV/AIDS, malaria and other diseases; ensure environmental sustainability; develop a global partnership for development*" (UN Millennium Development Goals 2000: Goals 1-8). Since 2015, the UN *2030 Agenda for Sustainable Development* has been trying to address these concerns by redesigning its approach to fulfilling the new SDG, focusing notably on establishing clear social and economic objectives and agreed indicators to monitor and evaluate the success of development projects and policies and encourage good governance.

This new context has also come with a general shift in international organisation discourse towards questions of who should be involved in development and/or cultural projects and tourism planning and how should progress be assessed/evaluated in order to ensure that

project and policies meet their objectives (UNDP 2009; UN 2015a; UNWTO 2015; UNESCO 2015). It has built on development in the management fields and models of good governance cycles in which monitoring and evaluation take a central role. The period has seen a development in monitoring and impact evaluation theory and method, with an increased emphasis placed on evaluating project outcomes and positive as well as negative impacts. In the tourism and heritage fields, this has translated into the development of a rich literature on the social and economic impact of heritage and tourism (Dumcke and Gnedovski 2013; Licciardi and Amirtahmaseb 2012; El-Beyrouthi and Tessler 2013; CHCfE 2015; DCMS 2016), including guidelines and best practice case studies on demonstrating impacts through monitoring and evaluation activities (UNWTO 2015; UNESCO 2012, 2014).

The last decades have also seen the rise of 'communities' and community-based approaches in planning and management, including in tourism, heritage and environmental conservation policies and practices. The widely accepted principle in environmental conservation is that interventions should at least do no harm to local communities (Dudley 2008). Transparency, community consultation and participation at all stages of the project conception, implementation and evaluation have been strongly advocated by international organisations, researchers and stakeholders in all sectors. As Waterton and Smith (2010: 6) have summarised, "*the community has come to form a central plank in public policy […], a series of concepts and policies have emerged that round on the idea of community: regeneration, social inclusion, civic engagement, civil renewal and sustainable communities, to name a few*". Both authors, however, also discuss fundamental limitations in these approaches when it comes to project implementation. Their criticism mirrors Chirikure's (2010: 30): "*most of the goals – particularly those aimed at involving local communities in decision making in heritage resources – still remain unfulfilled and at best experimental*". There have been some examples of good practice, including recent approaches developed in Chitwan and the Annapurna Conservation Area in Nepal, where communities have been able to develop their livelihood through tourism and alongside conservation activities (Joshi 2013; Nyaupane et al. 2006; Bajracharya et al. 2005). Nonetheless, in most cases a lack of knowledge and understanding of working with communities and engagement practices has limited the scope of community engagement to a passive role in the site development process (Waterton and Watson 2011; Waterton and Smith 2010: 7).

There have been widescale theoretical and practical changes in the fields of development, tourism and heritage management since the late 1960s-70s when the LMP was finalised, with still on-going discussions regarding the objectives and means to achieve them. Since the LMP has not been fundamentally updated or changed since the final design of 1978, these evolutions

have only marginally been transposed within the site development objectives, planning and development. Therefore, the LMP remains in many ways a product of international development organisations' policies, theories and practices from the 1970s. It was primarily a physical planning exercise, in the 1970s, and did not equip the site with a framework for integrating its growth within the wider regional social and economic development. However, other influences have also been at stake throughout the conception, preparation and implementation of the plan from both other international interests but also multiple national and local interests or concerns.

2.2.4. The international Buddhist community

Beyond the international organisations, the development of Lumbini also attracted the interest of the international Buddhist community. The international organisations and the Government of Nepal counted on these international interests to fund the implementation of the LMP, primarily relying on international donations to complete the different activities listed in the final design. The site is indeed regarded as one of the four most important and sacred Buddhist pilgrimage sites. The religious and spiritual importance of Lumbini Sacred Garden is emphasized in ancient Buddhist texts, as one of the four pilgrimage sites identified by the Buddha himself at the time of his final passing away:

"*These, Ananda, are the four places that a pious person should visit and look upon with feelings of reverence. And truly there will come to these places, Ananda, pious bhikkhus* [monks] *and bhikkhunis* [nuns]*, laymen and laywomen, reflecting: 'Here the Tathagata was born! Here the Tathagata became fully enlightened in unsurpassed, supreme Enlightenment! Here the Tathagata set rolling the unexcelled Wheel of the Dhamma! Here the Tathagata passed away into the state of Nibbana in which no element of clinging remains!' 'And whoever, Ananda, should die on such a pilgrimage with his heart established in faith, at the breaking up of the body, after death, will be reborn in a realm of heavenly happiness*" (Buddhist Publication Society 2010: 80-81).

At the time of U Thant's visit, access to Lumbini was very difficult, and only an estimated 800 pilgrims (excluding Indians) crossed the border from India, travelling by bus, car or on foot through dirt roads, to visit Lumbini (Alkjaer 1968: 21). Facilities for visitors once there were also limited to a single pilgrim rest-house (UNESCO 2013: 70). Therefore, a project involving the development of infrastructure in Lumbini had a strong appeal for Buddhist communities, in order for larger numbers to be able to visit and spend time in the sacred site. Moreover, Buddhism has a long tradition of pilgrims and patrons from across the Buddhist world funding

the renovation of ancient Buddhist sites, shrines and temples, with extensive evidence from archaeological, epigraphic and textual records (Coningham 2011: 937-9; Trevithick 1999; Ray 1994; Geary 2014: 653). Both the Mahabodhi Temple of Bodh Gaya and the Paranirvana Stupa of Kushinagara were reconstructed by Burmese monks in the nineteenth century, for instance (Trevithick 1999; Doyle 1997). In 1956, the *Fourth General Conference of the World Fellowship of Buddhists* was held in Kathmandu and included a visit to Lumbini (Dharmodaya Sabha 1956). During the Conference, Buddhist delegates "*expressed the urgent need to restore the Sacred Garden of Lumbini and to develop it in accordance with the historical and religious importance of the place*" (UNESCO 2013: 56). In preparation for the international conference and in response to the international Buddhist community's concerns, King Mahendra (1956-1972) publicly committed to developing the site and commissioned the construction of a road, a dispensary, a new pilgrim rest-house and the first modern temple in Lumbini, belonging to the Dharmodaya Sabha, a few metres away from the ancient religious complex (Dharmodaya Sabha 1956: Appendix, 20-23; UNESCO 2013: 56; Rai 2006: 19).

While it is difficult to estimate the actual size of the international Buddhist community, the interest for the project was quite widespread, as shown by the member states who joined the International Committee for the Development of Lumbini (ICDL) in 1970. The Committee members included countries for which Buddhism was either the state religion, the religion of the majority or of important Buddhist minorities, but also countries with a Buddhist heritage, like Afghanistan. The ICDL was formed to coordinate the project at the international level and made up of representatives of 13 countries: Afghanistan, Cambodia, India, Indonesia, Japan, Laos, Malaysia, Myanmar, Nepal, Pakistan, Singapore, Sri Lanka and Thailand, with later additions being Bangladesh, Bhutan and South Korea (UNESCO 2013: 98). Some of the members also formed their own national committees to support fundraising efforts, including Japan, South Korea, Thailand and Sri Lanka (UN 1979: 21). They actively raised funding for the project from a wide range of sources and donors in their home countries. Some members also provided active support, beyond financial contributions. Japan, for instance, offered expertise, first through the UN missions with the architect Kazuyuki Matsushita, working alongside the British archaeologist Raymond Allchin on the UNDP 1969 mission, and later through its renowned architect Kenzo Tange and the URTEC team who designed the LMP. Japan is still involved in Lumbini and its region, notably through its Funds-in-Trust deposited with UNESCO which has been funding the international project *Strengthening the Management and Conservation of Lumbini Birthplace of the Buddha World Heritage Site* with a planning team from the University of Tokyo. Through the Royal Thai Monastery, Thailand has had a physical and active presence in

Lumbini since 1994, while other governments have also built their own monasteries, including Myanmar (1993) and Sri Lanka (1994). The latter also notably funded the construction of the pilgrim rest-house in the Cultural Zone. The interest is not limited to states as large private Buddhist organisations have also made significant donations and proposed separate projects in Lumbini. The Peace Pagoda in the Cultural Zone, for instance, was funded by Nipponjan Myohoji Temple of Japan and completed in 2001.

Nepal's neighbours, China and India had mainly secondary roles and interests in the conception and preparation phases of the LMP, but their interest for Lumbini has been more significant in later phases. Some authors have linked this revived interest to the increasing importance of Buddhism and Buddhist sites in their national but also international politics (Ranade 2017; Scott 2016). With numerous sites associated to early Buddhism, particularly in Bihar and Uttar Pradesh, India has a rich offer for Buddhist religious pilgrimage, with sites closely linked to Lumbini, which has been recognised as a key asset for regional development (IFC 2013). The transborder nature of this Buddhist pilgrimage circuit has generated collaboration but also occasioned tensions, especially over rival claims to historical sites ownership between India and Nepal. The locations of Lumbini (Crossette 1994; McGirk 1996) but also Kapilavastu, his childhood home (Coningham 2000; Gellner 2018: 17), have notably been a source of division. The Indian Government, however, has also provided some support for the development of Lumbini, notably funding for the construction of the Museum. The current Museum exhibition was also funded and designed by Indian partners, with many replicas of Indian sculptures and artefacts. Beyond these contributions, the industrial provinces of North India have been an important source for the material and supplies required for infrastructure construction within the LMP (Gaige 2009: 40-2).

Chinese interest in Lumbini has become more visible and active in the last decade (Ranade 2017: 4). Although China was never a member of ICDL, the Chinese Buddhist Association's monastery is now one of the largest and most active monasteries in Lumbini. Through the Asia Pacific Exchange & Cooperation Foundation, Chinese donors have signed an agreement in 2011 with the Nepal Government and the UN Industrial Development Organisation for a three billion US dollar (USD) plan to develop Lumbini, with hotels, airport and a Chinese-managed university and seminary, although no steps have been taken yet to implement it (Ranade 2017: 5; APECF 2011). More recently, however, the Korean International Cooperation Agency (KOICA, Government of South Korea) has presented to the Nepal Government another development plan for Lumbini, the *Master Plan for the Lumbini World Peace City Preservation and Development*, which builds on the 1998 and 2004 *World Buddhist Summit*s declarations which recognised Lumbini as "*the*

Fountain of World Peace" (Vaidya and Khatri 1999). An agreement has been signed between both the Nepal Government and South Korean Government in 2014 for the implementation of this new Master Plan (Kwaak and ESPRI 2014), although no steps have yet been taken to implement it.

2.2.5. Conclusion

The wide range of international interests coming together in Lumbini have supported the development of Lumbini as an international centre for pilgrimage and tourism. Among the most active actors have been the international Buddhist communities, South, South East and East Asian national governments and international development organisations, all with their own agenda for the development of Lumbini. The diversity of interests has enabled the mobilisation of significant financial and technical contributions from the international community to design and implement the LMP. However, like the flow of foreign aid, one of the challenges that arises from the multiplicity of actors is the coordination of all these interests to prevent uncontrolled development around the site. With the conception of an overarching Master Plan, in the late 1960s and 1970s, the objective was thus to control these interests and coordinate contributions from the different stakeholders. The completion of the LMP has indeed been the single objective of site managers since 1978 and has been to a certain extent able to channel these interests around its implementation, despite some deviations from the original design. In the last decade, however, the multiplication of projects around Lumbini, including the Chinese 2011 plan but also KOICA's World Peace City, indicates that international stakeholder's coordination remains a complex management issue. Beyond the international actors, at national and local level, a number of different stakeholders have also had their own viewpoint for the development of Lumbini and how it fits in with national policies, regional development and the socio-religious context of Nepal and the Tarai.

2.3. National and local interests

2.3.1. Mixed interests at national and local levels?

The international interest in developing Lumbini received mixed responses in Nepal, some actors being very encouraging of the project, including influential figures like Crown Prince, and later King, Birendra (1972-2001), while others were less convinced and unwilling to invest resources in Lumbini. In a confidential letter sent in May 1970 to Yacoub Joury, UN resident representative to Nepal, Ferdinand E. Okada, UN advisor in region and community development, discussed his impression of the "*unenthusiastic attitude on the part of the Government of Nepal towards the Lumbini Project*" [the complete transcription is available in

Appendix 2]. The letter reviewed different actors' attitudes to the project, the reasons for the lack of enthusiasm of some of them but also the potential of the project in multiple sectors, including economic development. Many senior officers working in the different ministries involved had several political, economic, social and organisational concerns regarding the project, while other stakeholders within Nepal, including members of the royal family, Buddhist communities, businessmen and local residents in Lumbini regarded the project as having other significant political, economic and social potential.

This section reviews the different perspectives of national and local stakeholders and how they changed throughout the conception and preparation phase. It focuses on how Lumbini development fitted in national, regional and local priorities in economic development, social improvement and the religious context in Nepal, but also concerns within government administrations regarding management, resources and initial doubts on the worth of the project from an economic development perspective. Figure 2.2 is a brief timeline with key selected dates mentioned in the chapter. More information is available in Appendix 3 with a more detailed table summarising the main changes and events mentioned in this section, including political, economic and social reforms, linking them with the development of Lumbini.

2.3.2. The economic drivers

Following the end of the Rana period, the monarchy and political parties began economic reforms to 'modernise' the national economy and enter the international market (Bhooshan 1979; Whelpton 2005). In this context, the Lumbini development project fitted in two main national policies/planning priorities: 1) development of the under-exploited Tarai region and 2) development of tourism, building on the cultural and natural heritage of Nepal, with the finalisation of a national tourism master plan in 1972 (Gaige 2009: 6; Shrestha and Shrestha 2012).

Until the mid-twentieth century, the lowland region of the Tarai was a sparsely populated area of subtropical forest and swamps (Gaige 2009: 58-66). The region was a malaria zone, inhabited primarily by a few immune indigenous groups, like the Tharu communities. At national level, the region had been mainly used as a buffer zone between British India and the Hills (Savada 1991; Gaige 2009). Early migrations from the Hills to the Tarai (eighteenth-nineteenth century) were marginal while there was occasional small-scale immigration of Indian farmers across the border to exploit the uncultivated lands of the Tarai (Gaige 2009: 58-9). By the twentieth century, the Tarai had become a strategic region in national development, as the main gateway to/from India but also for the still under-exploited lands, which offered new opportuni ties to increase the

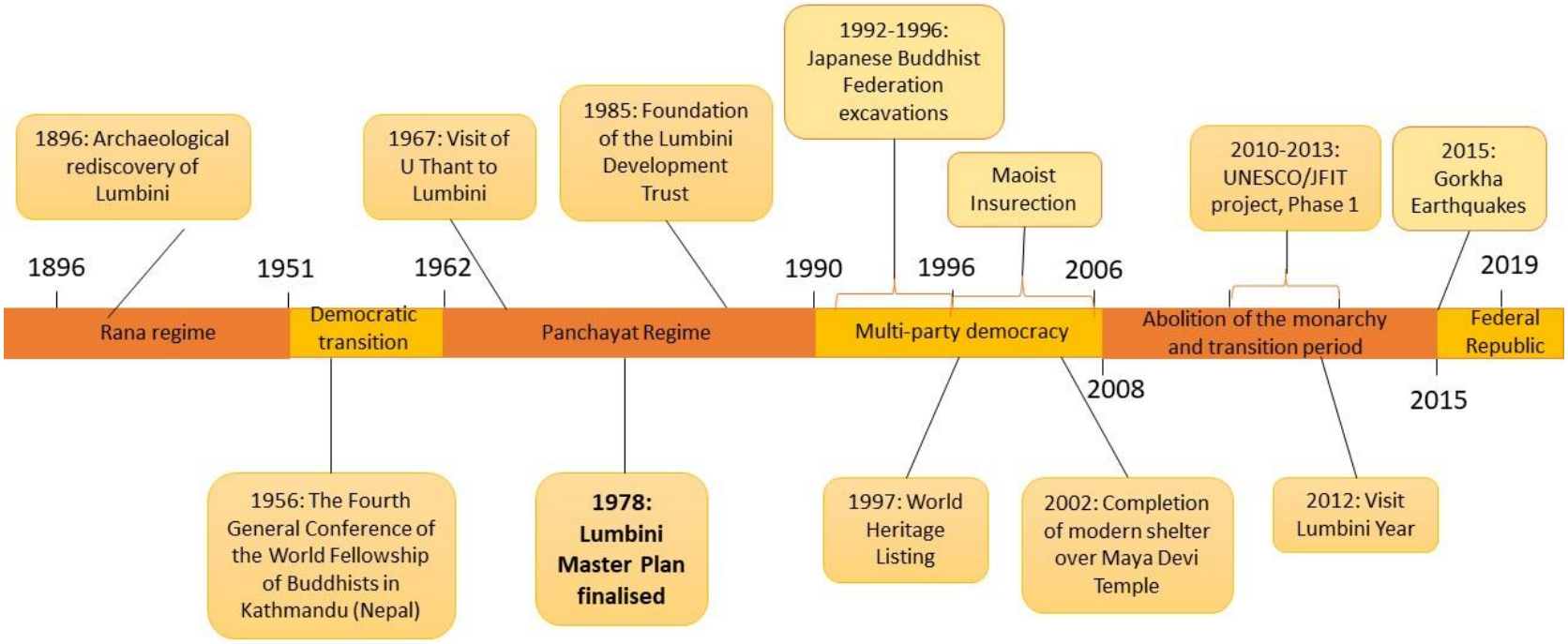


Figure 2.2 : Timeline representing key events in Lumbini and Nepal, with the main regime transitions (Source: Author)

national agricultural production and release population and agricultural pressure from the Hills (Dahal 2008; Shrestha 2001: 7-8, 20). By the mid-1960s, the Tarai represented nearly 60% of the country's GDP and over 76% of its national revenue (Gaige 2009: 28; Regmi 1976: 2-3). Population also rose rapidly, with notably inward migration from the Hill regions of Nepal and India. In most districts from the Far Western to the Western Tarai, including Rupandehi District, the average annual population growth rate for the 1971-1981 decade was over 4% (Shrestha 2001: figure 4.1). These rapid changes were fuelled by series of land reforms and resettlement programmes in the 1950s-1960s which altered the agrarian and traditional social structure of the Tarai. These initiatives notably include the Lands Act (1964), the Rapti Valley Development Project (1956) and the programmes implemented by the Nepal Resettlement Company from 1964 which all struggled to address issues of landlessness and inequalities in landownership and/or tenancy rights (Kansakar 1980: 33-34; Regmi 1976: 197-198, 208). With the success of the malaria eradication plan in the 1950-60s the last major drawback for people from the Hill regions to immigrate to the Tarai where there were increasing economic opportunities was removed (Gellner 2007: 1824; Shrestha 1980: 43).

In addition to the large-scale internal migration from the Hills in the 1960s and 1970s, instabilities in nearby countries forced numbers of Nepali from the 'diaspora' in Burma, India and Bhutan to move to Nepal, many of them being resettled in the Tarai region (Shrestha 2001: 191; Hutt 1997, 2003; Gellner 2018: 5-10). Lumbini was directly affected by these changes and, following the relocation of residents from the villages inside the Project Area to other villages outside, additional pressure was placed on local land and resources with the resettlement of a significant number of refugees from India (Molesworth and Müller-Böker 2005: 196). By the end of the 1970s, the combination of planned resettlements and spontaneous migration had created a major problem of land encroachment and unplanned settlements of refugees and/or migrants in the Tarai. A World Bank Report (1978: 17) estimated that 7,000 families were spontaneously relocating to the Tarai every year while Shrestha's (1988) interviews with two resettlement officers reported that there were "*at least 10,000 landless and spontaneous settler households in each of the 20 Tarai Districts*" (Shrestha 2001: 191).

In this context, the project to develop Lumbini as an international pilgrimage and tourism centre and its associated infrastructure development, closely fitted in regional development plans. In his letter in May 1970 to Joury, Okada summarises it as followed:

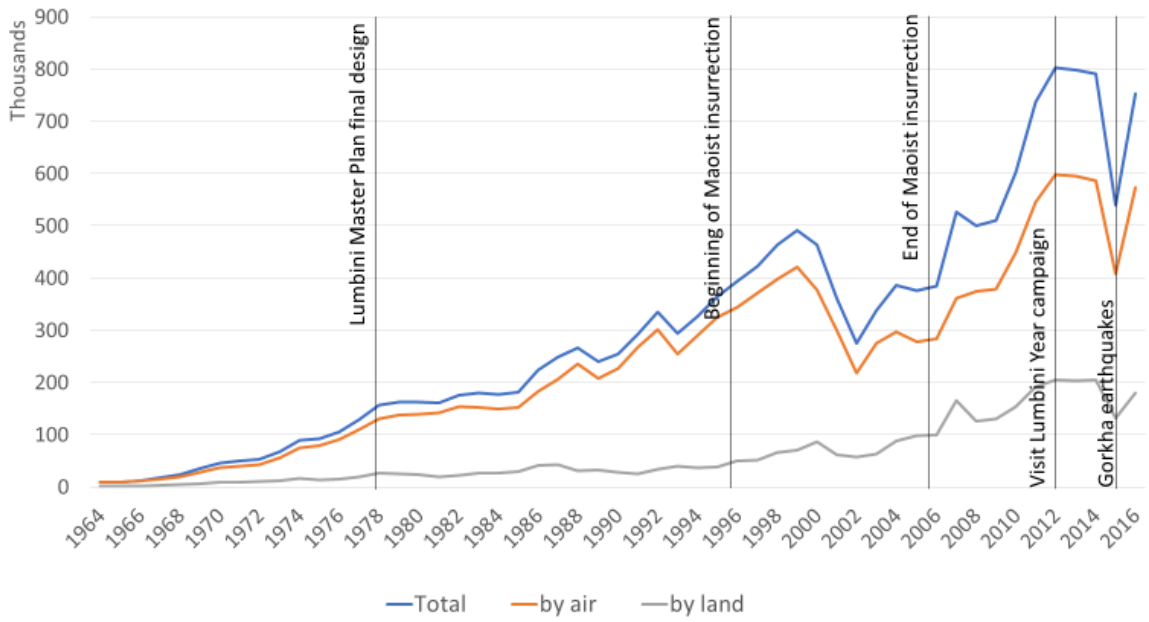
"*Integrated socio-economic development of the Lumbini area as a component of regional development, using fully the resources and organisations now available to set the area on the*

road to self-sustaining growth; when the Lumbini project is implemented, the people will be in a better positioning to cope with, and exploit, it to maximum advantage" (Okada 1970a: 4).

International pilgrimage, tourism and the development of Lumbini were seen as both offering employment opportunities for the rapidly increasing Tarai population into new economic sectors, including tourism and services, construction or transportation, but also valorising the regional agricultural productions, by providing producers with direct access to an international market (Alkjaer et al. 1968).

Another focus of national development policies was the development of tourism and creation of tourism clusters associated to the rich cultural and natural heritage of Nepal (Figure 2.3). A National Tourism Master Plan was finalised in 1972 (HMG 1972), a Ministry for Tourism was created in 1977 and key areas like the Kathmandu Valley, Pokhara or Gorkha became the focus of urban and tourism development projects (Shrestha and Shrestha 2012; Sekler et al. 1977). The Chitwan National Park located to the east of Rupandehi District, in the Tarai-based Chitwan District, was also established in 1973, enlarged in 1977, and an information centre and the 'Tiger Tops' lodge opened within the Park (Nepal and Weber 1994). Within these policies, Lumbini appealed to a very specific Buddhist market, including both pilgrims and cultural tourists with an interest in Buddhism. While that segment was complementary to the ones targeted by other Nepali tourism clusters, there were doubts as to whether the market would be a lucrative one,

Figure 2.3 : International arrivals in Nepal between 1964 and 2016



Source: Ministry of Culture, Tourism & Civil Aviation, Government of Nepal (2016): table 2.1

whether it would be able to attract sufficient numbers but also whether pilgrims would bring foreign currency into the local and national economy (Okada 1970a: 2; Alkjaer 1968).

As part of the first 1967-8 UN mission, Alkjaer (1968), the team tourism expert, provided a market analysis evaluating the potential of Buddhist pilgrimage but also difficulties specific to the market, based on official tourism data and interviews with tourism professionals. He referred to the long Buddhist tradition of pilgrimage to sites associated to the life of the Buddha, including the four main centres mentioned in the textual tradition, Lumbini, Bodh Gaya, Sarnath and Kushinagara (ibid.: 21). However, Alkjaer (1968: 22) recognised that the Buddhist pilgrimage market was at the time limited due to political and economic factors with, for instance, large Buddhist communities in China, Myanmar and USSR not being permitted to leave their respective countries, while others like Vietnam, Laos, Cambodia, Taiwan, Korea or Sri Lanka had not reached a standard of living enabling long-distance travel in the late 1960s. Japan and Thailand along with Hong Kong and Singapore but also a small market of growing Buddhist followers in the West were the main markets identified by Alkjaer in 1968 (ibid.: 22). With the political, economic and social changes of the last 50 years in countries with large Buddhist communities, and the large size of the Buddhist community worldwide, estimated between 450 and 480 million, the Buddhist pilgrimage market has increased and is expected to increase more rapidly in the future (Pew Research Centre 2012; IFC 2013: 30-1).

The other critical aspect that Alkjaer (1968: 25-7) identified for the success of the economic objectives of the Lumbini project was to ensure in the development and in the project management that Lumbini would be integrated in a national circuit. Indeed, his interviews with the Director-General of the Indian Department of Tourism notably indicated that "*The natural itinerary of Buddhist pilgrims would be, as it is at the moment, to land in India, undertake a circular tour to the various Buddhist holy places there plus a brief excursion to Lumbini and then depart again from India*" (Alkjaer 1968: 28). Such a development, Alkjaer mentioned would have "*almost no economic interest*" (ibid.: 27) for Nepal. By contrast, short trips from Kathmandu or other tourism clusters to Lumbini for one or two nights would be more beneficial for the overall national economy and for the Nepal tourism sector which could see an increase in the length of stay of visitors. One of the envisioned routes was a four-day circuit connecting Kathmandu, Pokhara, Lumbini and Chitwan area (Berry et al. 1974: 208).

Based on Okada's letter to Joury in May 1970, the economic viability was one of the main sources of division regarding the development of Lumbini and whether the returns would be worth the investment:

"*in relation to development priorities as seen by Nepal, […] Lumbini ranks low. This is indicated by such remarks as: 'Pokhara development is more important (than Lumbini)' – 'Please don't ask me for anybody (to work in Lumbini); I have nobody to spare' – 'It (the Lumbini Project) will cost us too much'. A doubt exists that there will be enough tourist interest, as different from pilgrim interest, to make the project economically worthwhile*" (Okada 1970a: 2).

These concerns strongly influenced the initial conception of the project and moved it away from its original regional scope to a smaller project focused primarily on the immediate surroundings of Lumbini. By contrast, Kathmandu or Pokhara were developed as urban and tourism clusters which have become major tourist destinations in Nepal. As a result, the concerns raised by Alkjaer in his tourism and pilgrimage market analysis were not addressed in the tourism planning in Lumbini which was only partially integrated in regional and national plans, mainly through the construction of regional transportation infrastructure, namely the Bhairahawa-Lumbini-Taulihawa road and the Bhairahawa Airport upgrading.

2.3.3. The social/religious ambivalence

The end of the Rana regime in 1951 marked a turning point in Nepali society. The country began a new phase of development and foreign policies, entering the international market, joining international organisations, including the UN in 1955, and receiving significant support through foreign aid for state-led development policies. The post-1951 governments also initiated important social reforms with the population gaining new civil rights and experiencing a democratic multi-party system for the first time (1959-60). One of the main changes of the new legislation, including the subsequent constitutions and the 1963 national legal code (Muluki Ain), was the abolition of discrimination based on caste, religion and ethnicity (Höfer 1979). The social reforms, economic diversification and foreign contacts, led to significant and rapid social changes in Nepal although the traditional structure of society maintained a strong presence, notably in the Tarai where the caste system is still particularly influential (Gaige 2009: 17; Hangen and Lawoti 2013: 14). This period also saw the promulgation, in 1956, of the Ancient Monument Preservation Act which provided a national legislation for the protection of Nepali heritage. It is the founding act of the Department of Archaeology (DoA), the national authority responsible for the identification, protection and conservation of the national heritage. The social, cultural and religious context of the time therefore both favoured the Lumbini project but also raised concerns from certain groups and provided the social and religious background within which the project was conceived, prepared and implemented.

Until the abolition of the monarchy in 2008, Hinduism was the state religion and it remains the religion of a large majority of the Nepali population today. While the census figures under the Panchayat regime have been contested, with evidence indicating that the size of Hindu communities in Nepal were systematically inflated, the Hindu population in Nepal during the period has always represented over 80% of the national population (Gellner and Letizia 2019: 5-6). Despite the large Hindu majority, other religious traditions have always co-existed in Nepal, including Buddhism which has been the second largest at national level and represented 7% of the population at the time, and Islam with 3% (ibid.). The latter has been particularly present in the Tarai, with an estimated 97% of all Muslims in Nepal living in the region (Siddique 2001: 336; Siddika 1993: 139; Dastider 2000). Many religious traditions have also shared religious places, most notably Lumbini and Muktinath which are sacred sites for both Buddhists and Hindus. The main Buddhist schools in Nepal have been Tibetan Buddhism, Newar Buddhism and the Theravada tradition which has made its way to Nepal more recently (in the 1930s) but has been increasing rapidly since (Gellner 2018: 19; LeVine and Gellner 2005: 12). Nearly all Buddhist communities have been from the Hill regions and/or the Kathmandu Valley. Buddhism has had a special place in Nepali society, notably due to its close links with Hinduism: for example, Hindus regard the Buddha as a reincarnation of the god Vishnu who was himself associated with Nepali kingship. Nonetheless, the development of a large-scale project at a Buddhist site, like Lumbini, did not appear a priority for all Nepali and civil servants, based on Okada's letters and observations. Concerns included both religious and political reasons:

"*These [religious concerns] appear to be a reluctance to encourage Buddhism in a Hindu state. Buddhism is considered a minor and minority religion in Nepal and there is little awareness of its extent or importance in other Asian countries. Perhaps there is also a feeling that encouragement of Buddhism governmentally will result in its political strength nationally*" (Okada 1970a: 3).

By contrast, for the Government, the presence and development of the birthplace of the Buddha within its borders was seen as an important part of its foreign policy: "*since Lumbini lies within the boundaries of modern Nepal, the Buddha plays a significant role in representing Nepal to the outside world*" (Gellner 2015: n.p.). At the local level, the communities around Lumbini were not, and still are not, Buddhists but mainly a mix of Hindus and Muslims. However, like many Buddhist sites, the Sacred Garden has also been a sacred place for Hindu communities. Its local significance is not only due to its association with the Buddha, but the site has also been related to the worship of a local goddess. When the site was rediscovered in 1896 by Führer (from the Archaeological Survey of India), and General Khadga Shamsher, the former recorded the

worship of a goddess named Rummindei (also known as Rupa Devi) who gave her name to Rupandehi District within which Lumbini is located (Führer 1972: 33). Similarly, the Indian archaeologist Mukherji who excavated in 1899 also referred to the local ritual practices at the site (Mukherji 1901: 34). At the time of Führer and Mukherji's visits, the Nativity Sculpture, representing Maya Devi giving birth to the Buddha, was kept in a shrine and Hindu rituals were performed at the site, including reports of animal sacrifices until the practice was banned in 1926 (Nyaupane 2009: 165; Subedi 1999: 135). One of the main religious festival in Lumbini today is still dedicated to the goddess, who is now associated with the Buddha's mother Maya Devi and takes place on the Full Moon Day of the *Chaitra* month (March/April). There has been otherwise very limited mention of Rummindei / Rupa Devi and related rituals in the literature and no other known shrines. Okada (1970a: 4) thus summarised the interest of local communities as follows:

"*The people of Lumbini, Hindus and Muslims both, who see Lumbini Garden as a sacred spot. Its development, if Buddhism is not rammed down their throats, would be seen as a general religious act, not a specific Buddhist one. They also expect to derive economic benefit from a development scheme both directly (employment) and indirectly (roads, water, schools, etc).*"

Interviews conducted in Lumbini in the 2000s suggested that, for many residents and communities in Lumbini, this description remained fairly close to their expectations and their perception of the archaeological site at the time, especially Hindu communities for whom the site had a strong religious value (Molesworth and Müller-Böker 2005; Pandey 2007: 17). However, these interviews, along with other evidence discussed in the following sections, have also suggested that this has been a component that has not been sufficiently integrated within the LMP conception, preparation and implementation phases.

Another important post-1951 change which started mainly with King Tribhuvan's heir, King Mahendra (1956-1972), was the active promotion of a national Nepali identity (Gellner 2002: 10; Whelpton 1997). The King promoted the development of a common national identity anchored around Hindu kingship, the Nepali language but also opposition between Nepal/Hills and India/lowlands. The lowland Tarai region which has been demographically, culturally and linguistically strongly influenced by the proximity with India was thus more divided within these policies: on one side, many Nepali from the Hill regions were prejudiced against the lowland populations, which were seen as outsiders whose allegiance was not guaranteed, while Tarai populations did not speak Nepali but their own dialects, had their own caste systems and had little cultural affinity with Hill populations (Whelpton 2005: 187; Gellner 2013: 15). Ethnic and

caste differences were being erased in nationalist discourses but, in the Tarai, "*the lion's share of the fruits of development and rapidly expanding educational opportunities and rewards went to those groups, who were already well connected and had long established traditions of literacy and academic study*" (Gellner 2011: 51), primarily upper caste households migrating from the Hill regions (Gaige 2009: 74). The contrast between the uniformity of culture and caste promoted in national policies and the unequal access to new employment opportunities spurred discontent and resentment from different tribal, ethnic and cultural groups (ibid.: 202-5). Terms previously used as geographical markers, *Pahadi*, residents from the Hills, and *Madhesi*, inhabitants of the Tarai lowlands, became used to express polarised cultural identities in reaction to nationalist policies and economic and social inequalities (Dahal 2008; Burkert 1997: 254-5; Hachhethu 2008: 65-6). Thus, the term *Madhesi* began to mean much more than resident of the Tarai and expanded to include shared languages, caste structures, names and religious rituals, different from both the Hills and India, but also from indigenous populations living in the region (Whelpton 1997: 68-9; Jha 2017).

Today, the Tarai demography is in many ways a microcosm of the "*multiethnic, multilingual, multicultural, and multi-religious*" context of Nepal (Constitution of Nepal 2015: art 3). Table 2.1 provides demographic data for the Western Tarai, with population figures, religion and main languages, based on the 2011 National Population Census data. The largest indigenous group is

Table 2.1 : Nepal Western Tarai population demographic profile (Source: Nepal Population Census 2011)

District		Nawalparasi	Kapilbastu	Rupandehi	TOTAL
Household		128,793	91;321	163,916	**384,030**
Population	Total	643,508	571,936	880,196	**2,095,640**
	Male	303,675	285,599	432,193	**1,021,467**
	Female	339,833	286,337	448,003	**1,074,173**
Average Household Size		5.00	6.26	5.37	**5.00**
Sex Ratio		89.36	99.74	96.47	**95.09**
Religion	Hindu	567,450	461,070	759,046	**1,787,566**
	Muslim	24,160	103,838	72,428	**200,426**
	Buddhist	38,615	4,986	40,571	**84,172**
	Other	13,283	2,042	8,151	**23,476**
Mother tongue	Nepali				**686,235**
	Bhojpuri				**510,288**
	Awadhi				**340,927**
	Tharu				**182,892**
	Other				**375,298**

the Tharu community present notably in the surroundings of Lumbini, who account for 9% of the Western Tarai population. Despite the wealth of the region and its role in the national economy, at the regional level, the Tarai has long been characterised by high economic inequalities and socio-cultural issues (Lawoti 2013; Gaige 2009; Shrestha 2001). The latter include gender, ethnic and caste inequalities but also tensions between different ethnic and religious communities, often linked to national migration policies, land ownership and tenancy rights. Reviews of the post-1951 period indicated that the development process, including economic growth and infrastructure development did not meet the rapid population increase and the new economic, social and environmental pressures it induced (Gaige 2009; Shrestha 2001). The early documents on Lumbini development, including Okada's documents, Joury's reports, and UN and UNDP mission clearly suggested that one of the driving factors for the project, notably for the international stakeholders, was related to these issues and that the LMP needed to address them. The last part of this chapter discusses how these issues were integrated in the final design of the LMP. The following chapter (Chapter 3) reviews the implementation of the Plan and what limited the potential of the site to address these issues. The analysis suggests that the site development has tended to mirror the existing social cleavages in the Tarai.

2.3.4. Political, administrative and managerial concerns

Under the Rana regime, there had been a certain continuity in national policy and structure, despite the shift of power from the royal family, who unified the country in the eighteenth century, to the Rana family who became hereditary Prime Ministers in 1846 (Gellner 1997: 5). After 1951, the democratic transition was marked by strong political dynamics between the three forces which led the regime change, the King and the royal elite, the political parties and India (Whelpton 2005: 88-9). The power struggle and interaction between these three forces has been the main force affecting political structures that have succeeded one another in Nepal since 1951. By the time of U Thant's visit, the monarchy had taken the ascendance over political parties and replaced the multi-party democracy established under the 1959 Constitution by the Panchayat regime, in which political parties were banned, replaced by 'a bottom-up' election system, from locally elected councils, selecting district councils themselves electing most members of the national Rastriya Panchayat (Figure 2.4) (Whelpton 2005: 99-107; Sharma 2017:59-62). In practice, however, the Rastriya Panchayat had limited powers and the King had absolute control as head of state. The Panchayat lasted from 1962 to 1990, with some reforms in 1980 following social and political unrests and the 1979 national referendum (Hutt 2004: 2-

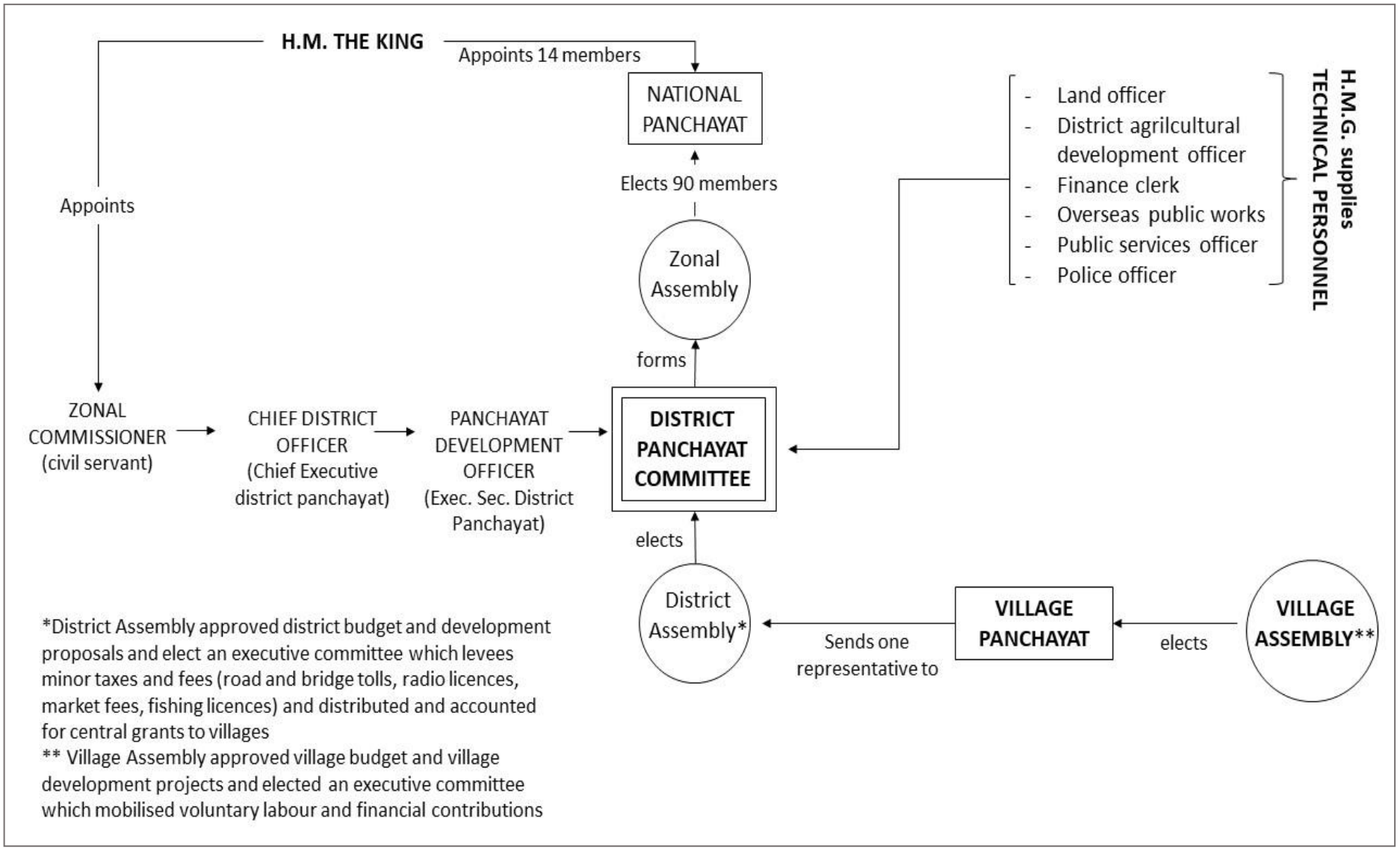


Figure 2.4 : The Panchayat administrative system, with the different levels, Village, District and National Panchayat and their responsibilities (adapted from Berry et al.: Figure 1)

4; Gellner 1997: 6). The conception, preparation and early implementation of the LMP took place under this regime.The Panchayat has had an important influence on the conception and early implementation of the LMP. The strong centralisation of the system meant that the elected administration at the local level had little say and was not thoroughly consulted at any phase. Berry et al. (1974) who did a review of the situation in the neighbouring Nawalparasi district described the functioning of the local Panchayat system as follows:

"Even Zonal Commissioners can exert little influence on government-selected priorities, or effect coordination between central departments: District Panchayats have little opportunity to influence the central planning of major developments, though both project identification and programming are frequently better innovated at District level. Even with minor projects Village Panchayats may find difficulty in communicating their needs to the National Planning Commission" (Berry et al. 1974: 213).

The lack of local and regional inputs in the conception and implementation of the LMP has had an important impact on the perception of local communities on the project (Martin 2008: 24). Local populations or their representatives had little say on the decisions that were made in the planning phase, including land acquisitions and resettlement plans. By contrast, in the Kathmandu-based centralised administration, interest on the Lumbini project was not consistent across administrations, individuals and changed over time. As previously mentioned, Okada (1970a: 1) refers to a lack of interest from most senior officers in the different departments and ministries involved, except for the Director of Archaeology in the DoA (Government of Nepal). While some of the reasons for this lack of interest, including economic, social, religious and political factors have been discussed previously, already existing pressure on the limited resources available in their departments and ministries have also played an important influence. Human, capital and financial resources were often already monopolised by other projects, including Kathmandu and Pokhara development (Okada 1970a: 3).

There was thus a gap in the public administration implementing the project between the strong interest expressed by influential figures, including the Crown Prince Birendra and the UN Secretary-General U Thant, and most Nepal Government senior officers involved in the early stages who either needed convincing on the worth of the project or did not have sufficient resources to contribute effectively to its conception. The suggestion made by Okada (1970a: 5) in his letter was ultimately the one that was followed, a single national coordinating agency under a royal family member Chairmanship. The Lumbini Development Committee, the LDT predecessor as site manager, was thus formed in 1970. Along with the ICDL (UNESCO 2013), its

early tasks included notably identifying the resources to finance the project, appealing notably to the international community and private donors from among the international Buddhist communities.

2.3.5. Conclusion

The conception, preparation and implementation of the LMP was undertaken in a specific international, national and regional context, where political, social and economic factors intertwined and played a critical role in both defining the project, its objectives and activities but also affecting its long-term implementation. While the development of Lumbini had a strong religious component, to facilitate access and provide facilities for Buddhist pilgrims to worship at the birthplace of the Buddha, it was also generally recognised that *"in a country at this stage of development, pure or mainly religious investments cannot be justified"* (Alkjaer 1968: 26) and that *"to develop the birthplace of the Buddha without simultaneously promoting the standard of living of the people in the area would not be meaningful"* (HMG 1973: 2). However, and particularly in its early conception phases, the project was already divisive among national actors due to concerns over the national political, religious and economic context, lack of resources to implement it and doubts regarding its return on investment and its potential to trigger significant economic and social development in the Western Tarai region.

By contrast, the LMP has channelled, to a certain extent, the diverse interests of international and national actors into a coherent plan to avoid uncontrolled development. The LMP has been primarily an infrastructure planning exercise, representative of the development and tourism practices in the 1970s. It does not consider wider planning issues, including ensuring market linkages in order to avoid leakages and thus reduce economic benefits, but also integrating community consultation and participation in the site development and developing a clear monitoring and evaluation framework for the project implementation and its impacts.

The conception phase of the LMP also foresees some of the main drawbacks for the implementation of the project, including the lack of coordination between different development efforts and projects in the region with the LMP. Lack of resources was early on an important issue which was partly addressed by the creation of the Lumbini Development Committee but without the coordination and support of other ministries, including agriculture, transport, or industry, it limited the management of the project within the boundaries of the LMP. Ultimately, the tourism market analysis raised concerns over the market potential, with only a small minority of Buddhists able to travel for pilgrimage in the 1960s and 1970s, and leakages to consider. Indeed, the 1968 UN mission tourism expert Alkjaer (1968) strongly

emphasized the importance of integrating Lumbini within a national tourism product to avoid a more excursionist type of tourism and pilgrimage from India which would limit the economic impacts and return on investment of the Lumbini development. The following sections will consider how these concerns and issues were tackled in the final design of the LMP.

2.4. The Lumbini Master Plan: Definition of objectives and final design

2.4.1. The conception and preparation of the Master Plan (1967-1977): Evolution of the project vision and definition of social and economic objectives

Following the visit of U Thant and his meeting with King Mahendra in 1967, a UN mission was invited by the Nepal Government to visit Nepal in December 1967 and January 1968. The three-man mission envisioned the development of Lumbini as part of "*a basic regional master plan […] for the integrated development of the whole complex of sacred places and servicing areas embracing Kapilvastu, Lumbini and Bhairahawa"* (Kobe et al. 1968: 1). But several factors led to the idea of a regional development plan for Lumbini being pushed to the side. Based on the Joury report (1969) and Okada's letter (1970a), the factors included the start of the Regional Development Plan for Kathmandu Valley in 1969, already stretching the resources of the Nepali Government, and concerns raised over the rationale for another regional development plan when several other national and international projects were already actively involved in preparing plans for the Lumbini zone. It was therefore agreed in the following year that the UN involvement would be limited to the site itself (Joury 1969), although the link between site and regional development was emphasized throughout the planning phase. This approach was further articulated in the 1969 UNDP mission report, prepared by British archaeologist Raymond Allchin and Japanese architect and planner Kazuyuki Matsushita, and the KTU reports (Allchin and Matsushita 1969: 31; KTU 1972, 1976, 1977, 1978: 8).

The fundraising campaign to finance the conception of the LMP was launched in 1970 and inaugurated with a speech by the Secretary-General U Thant and the publication of a brochure (UN 1970). ICDL had been established earlier that year in New York, with representatives of 13 countries of Buddhist traditions under the chairmanship of Nepal's Permanent Representative to the UN, to coordinate the project at the international level (UNESCO and UNDP 2013: 7). In addition, the Lumbini Development Committee was established by the Government of Nepal, in the same year, to coordinate the project at the national level. Other members formed their own national committees to support fundraising efforts in their home countries, including Japan, South Korea, Thailand and Sri Lanka (UN 1979: 21). The project presented in the UN brochure (1970) had five components: 1) the Sacred Garden 2) Monastic Enclave, 3) New Lumbini Village, 4) Bhairahawa-Lumbini-Taulihawa road and 5) Agricultural buffer zone.

Additional elements of the project mentioned in the brochure were the upgrading of the local Bhairahawa Airport and the construction of a tarmac road linking Bhairahawa to Lumbini and the site of Tilaurakot, believed to be ancient Kapilavastu, the childhood home of the Buddha. Ultimately, Okada was tasked with collecting data on local communities in the vicinity of the Lumbini Garden "*about whom virtually nothing was known*" (Okada 1970b: 106). He conducted a survey to provide a socio-economic baseline to inform the physical planning and provide advice as to how to minimise negative impacts on local communities.

In the 1971 meeting of ICDL, the members of the Committee defined "*four major elements which are the basis to establish criteria for the Master Plan"* (UN 1971: 2). The four orientations for the project included 1) Socio-Economic, 2) Cultural and religious, 3) Historical and archaeological and 4) tourism components. The following report described the Socio-Economic component as follows:

"The Lumbini Project should be developed not only as a place of religious and cultural significance, it should also be developed as a project of tourist interest. The development should take into account the regional proposals being proposed by the Government of Nepal without however delaying the preparation of the design proposals" (UN 1971: 2).

In 1972, Professor Kenzo Tange and his firm URTEC were commissioned to develop a functional layout integrating all five physical components and the four orientations of the plan (UNESCO 2013: 106). They developed an initial *Final Outline Design for Lumbini* (1972) and several versions of the *Master Design for the Development of Lumbini* (1976, 1977) until the final LMP was approved by ICDL and the Government of Nepal in 1978. Appendix 1 provides a complete list of all components of the LMP with estimated cost. The following section presents the final outline of the LMP, including the physical planning, the cost and phasing of the project.

2.4.2. The Lumbini Master Plan Final Design (KTU 1978)

The LMP was divided in several areas with different functions within the development project (Figure 2.5). As recommended in the 1969 Allchin and Matsushita's UNDP mission, a five by five miles buffer zone was defined around the archaeological site, known as the Lumbini Development Area, where economic activities were to be limited to the agricultural sector. Within this area, a three by three miles square was identified as a restricted area within which both economic and construction activities were to be controlled (KTU 1978, 1972: 7). The central one by three miles strip represented the Lumbini Project Area where the main infrastructure, facilities and services were to be developed. It was also decided that all seven villages located

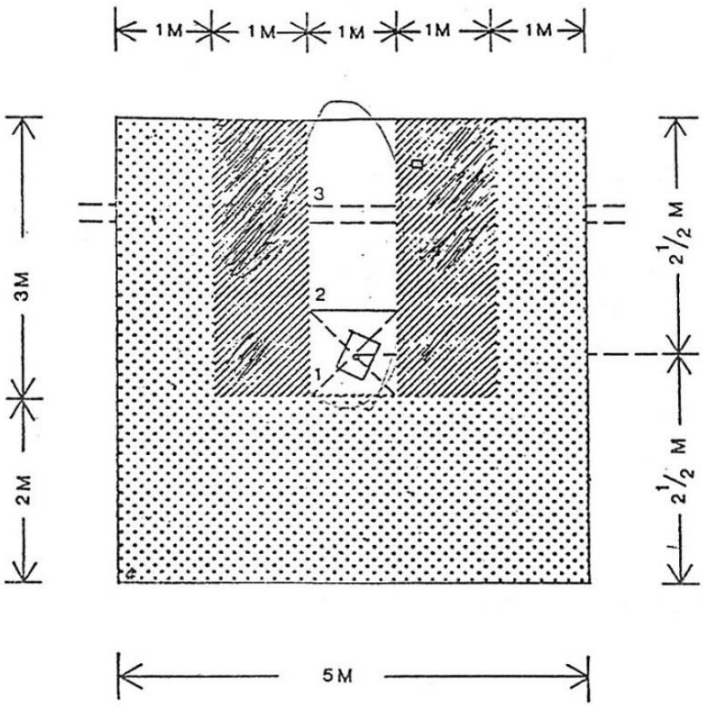


Figure 2.5 : Concept sketch of the five by five miles Lumbini Development Area.
The Agricultural Buffer Zone is represented by the dotted areas, the three by three miles strip is the hatch areas and finally, the white area is the Project Area with 1) the Sacred Zone, 2) the Monastic Zone and 3) the Cultural Zone (KTU 1978: 5)

within the Project Area were to be removed (KTU 1978: 8). Figure 1.1 already presented the physical layout of the Project Area, approved by the Government of Nepal in 1978. The one by three miles strip was divided in three, one by one miles, zones: the Sacred, the Monastic and the Cultural Zones, linked together by a central canal and a visual link connecting the Lumbini Cultural Zone and the Asokan Pillar standing at the other end of the Plan. For each zone, sewage, potable water supply, electricity, pathways, roads, and telecommunication systems were also planned, along with various landscaping activities (KTU 1978: 23-55).

The Cultural Zone (Figure 2.6), at the north end of the Project Area, was designed as "*the centre for tourism and administrative facilities of the Lumbini Garden, and at the same time the point of departure for pilgrimage to the Asokan Pillar*" (KTU 1978: 56). The zone was cut by the Bhairahawa-Lumbini-Taulihawa road. To the north of the road, the New Lumbini Village provided the main facilities for visitors, including arcades, shops, restaurants, three types of accommodations for different budgets and a camping site. Social services, including a police station, a health centre and banks for both visitors and residents were also planned in that area. The construction of a high school was also planned to replace the one removed from the Sacred Area (ibid.: 70). To the south of the road, the Cultural Centre was a transitional zone between

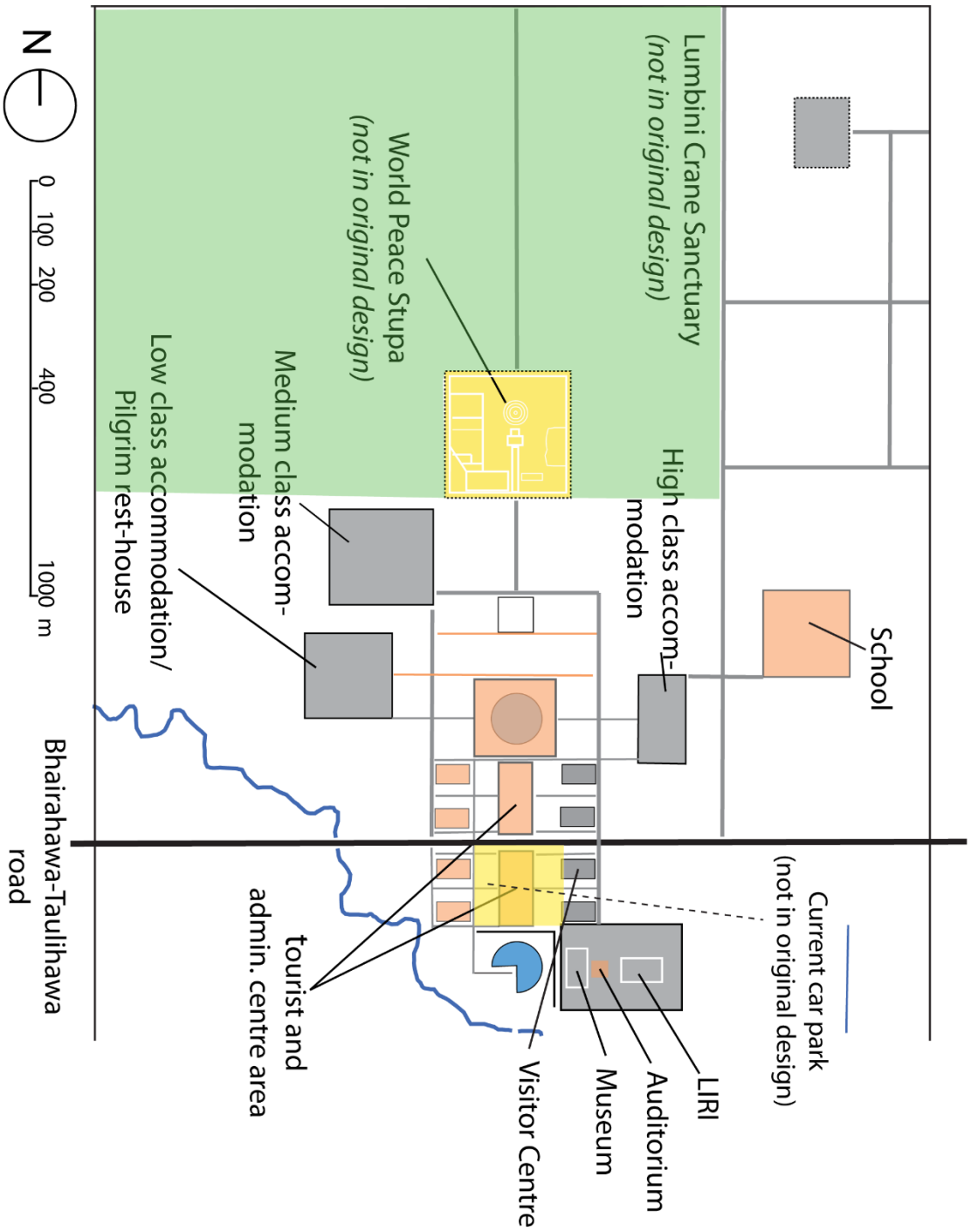


Figure 2.6 : Sketch plan of the Cultural Zone with components designed in the 1978 Lumbini Master Plan and later alterations: in yellow are added components (World Peace Stupa, Crane Sanctuary) and in orange components not yet implemented. The Lumbini Crane Sanctuary was also a later addition to the LMP (Source: Author, adapted from UNESCO-UNDP 2013: 17-8).

the purely everyday facilities and services and the more spiritual space. The Cultural Centre provided facilities to study and learn about Buddhist history and philosophy, including a museum, an international research centre, a library and an auditorium. The central link (Figure 2.7) was designed to prepare the pilgrim for the "*culmination of experience*" (KTU 1978: 61), facilitate public circulation and provide key facilities. The main component was a central canal with large pathways on either side: visitors could thus either walk, cycle, or use boats or other non-motorised vehicles to reach the Sacred Area. In 2001, a World Peace Stupa was built behind the Pilgrim Accommodation Area in the axis of the central link, extending the visual link with the Sacred Area. The latter was not, however, in the original design and is part of an international network of Peace Stupas that have been built primarily by the Japanese Nipponzan Myohoji Buddhist Order since the Second World War.

On either side of the central canal, the Monastic Zone (Figure 2.7) was located immediately to the north of the Sacred Area and was separated from the central link by a forest area. It was divided into 42 plots of land of three different sizes that could be acquired by monastic institutions from all over the Buddhist world to build a monastery in Lumbini. The zone was divided through the central canal between the two main Buddhist traditions, Theravada to the east and Mahayana traditions to the west. The regulations related to the monasteries have been a source of discussions and conflicts between different local stakeholders. The LMP provided some building regulations, including the number and sizes of plots but also the height of buildings which were not to exceed three storeys (KTU 1978: 67). Some monasteries, like the Korean Temple, have managed to build very high buildings which are still within the three-storey limit. In terms of the monastic community, the LMP estimated a capacity of 1,200 residents, including permanent monks/nuns and visiting pilgrims (KTU 1978: 50). However, the LDT (2002) has developed its own by-laws to manage plot leases, construction work and activities in the monastic zone. Following the monastic zone by-laws (LDT 2002), the monasteries are only allowed five monks and five assistants to reside in the monastery. Suggested by Allchin and Matsushita (1969), the monastic zone has enabled to a certain extent control of the construction of monasteries around the sacred site which is an important challenge at other ancient Buddhist sites (i.e. Tilaurakot-Kapilavastu, Ramagrama) but also to create a wider religious community which brings together different sects of Buddhism. By contrast, as already indicated above, it has also its own managerial challenges, including developing links with local communities on the outside and delivering economic and social benefits to local populations.

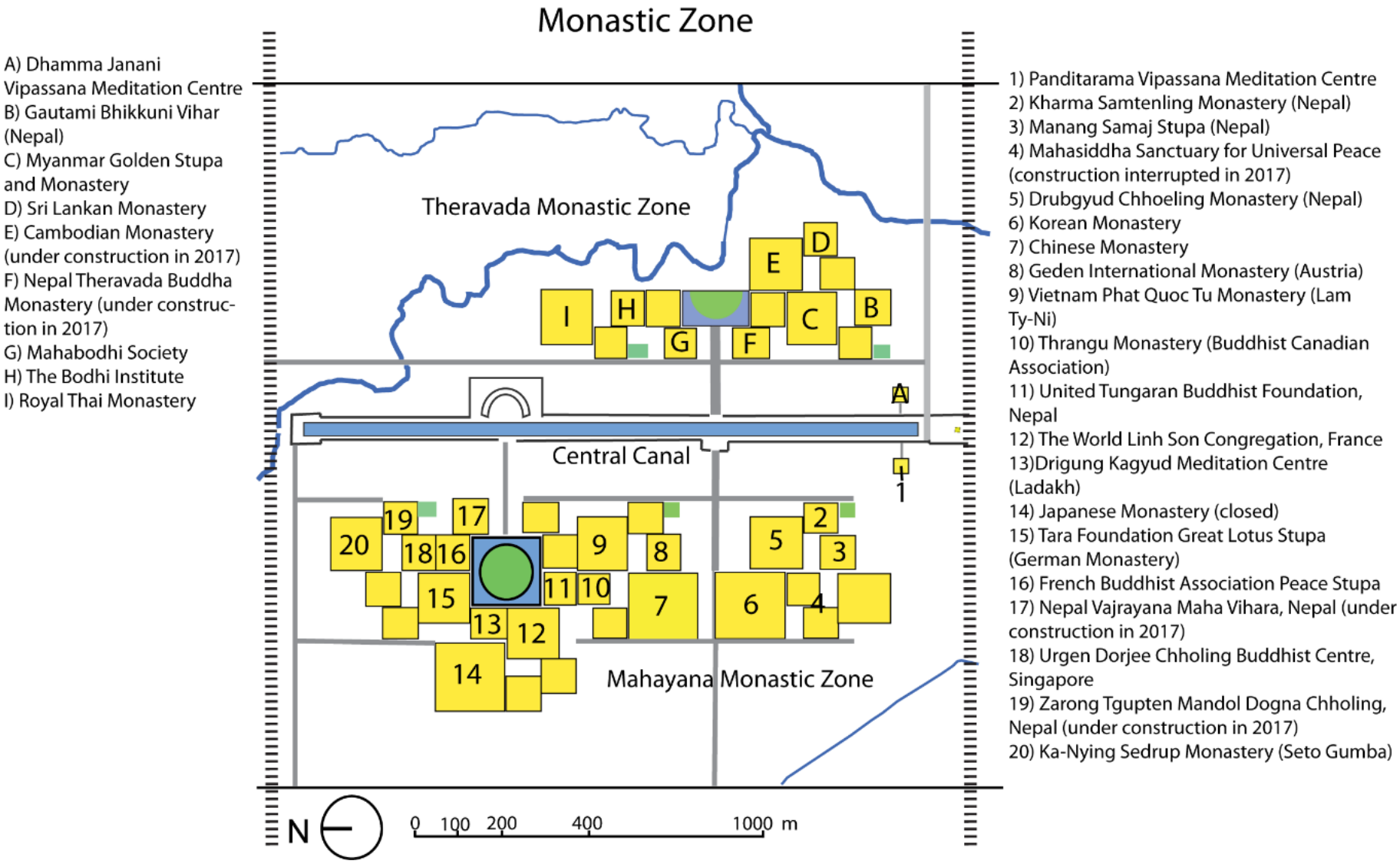


Figure 2.7 : Sketch plan of the Monastic Zone with the components designed in the 1978 Lumbini Master Plan, but also location of different monasteries (Source: Author, adapted from UNESCO-UNDP 2013: 17-8)

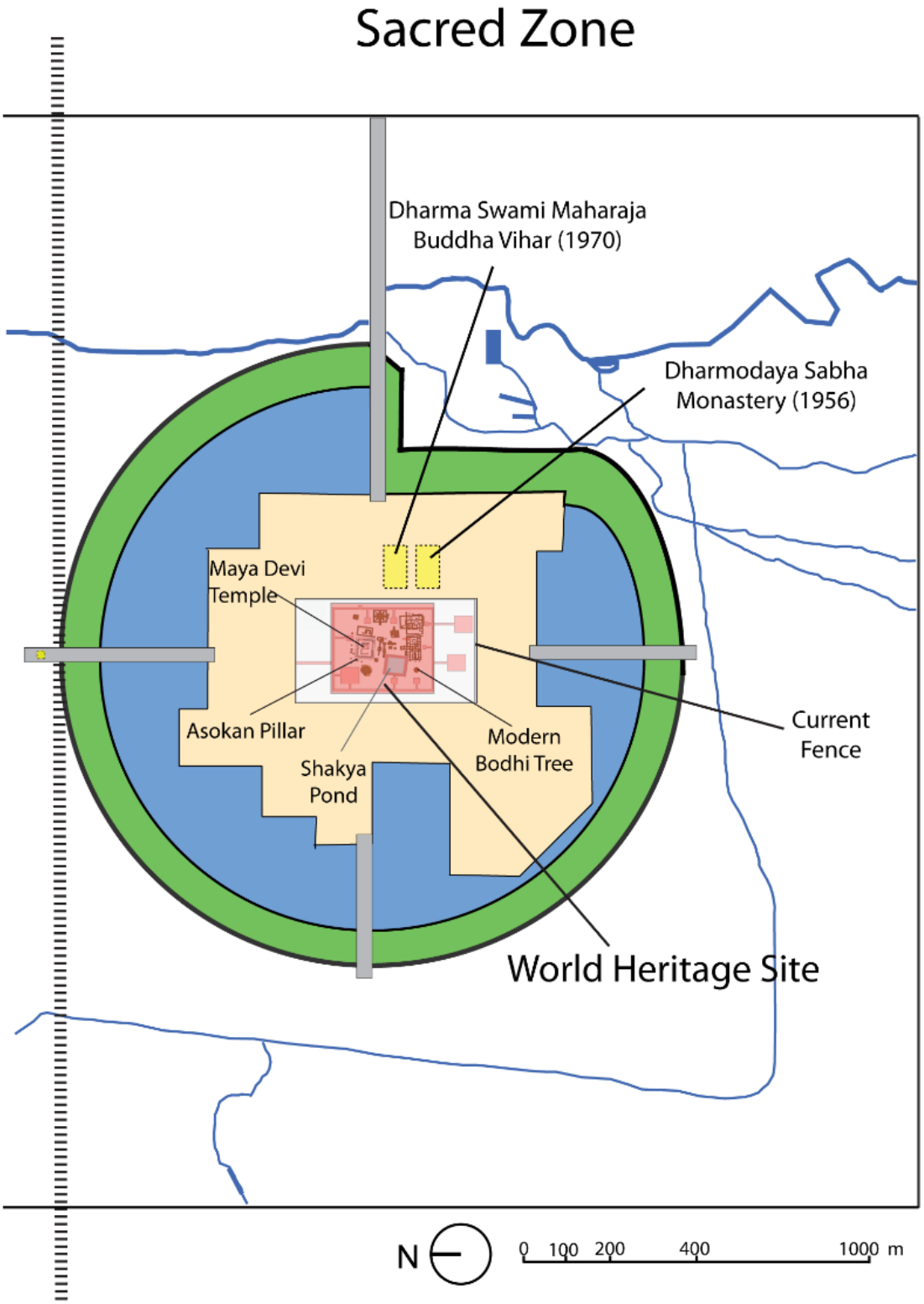
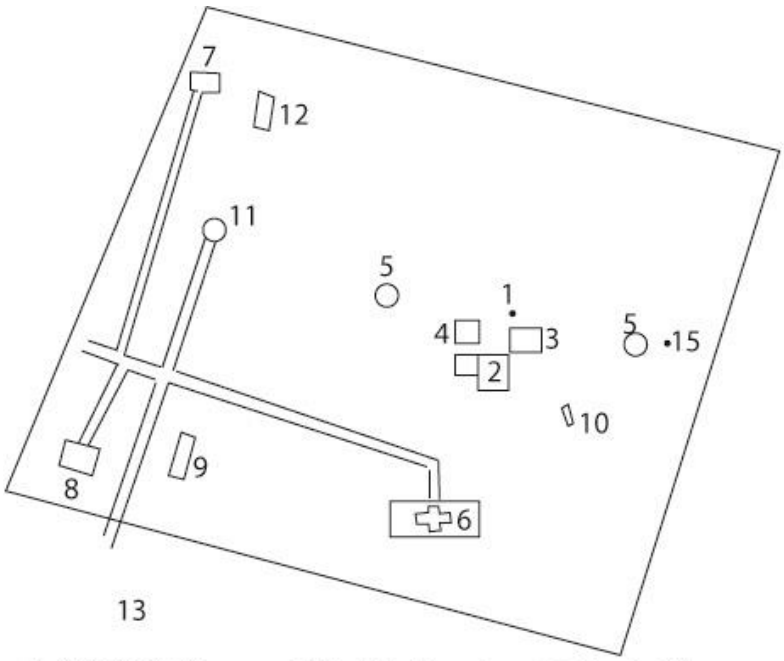


Figure 2.8 : Key features of the Lumbini Sacred Garden today. As per the Lumbini Master Plan, the monasteries were to be relocated in the monastic zone (Source: Author, adapted from UNESCO-UNDP 2013: 17-8 and Coningham and Acharya 2012: fig 5.3)

The focal point of the LMP is the Sacred Area (Figure 2.8) within which are the main archaeological sites, including both the religious complex with the temple, Asokan Pillar, pond, viharas and stupas but also the ancient settlement located to the south west of the sacred site. To protect archaeological remains from regular flooding, an artificial levee was designed around it, but is incomplete to the south east in order to allow the river Telar Nadi, which is mentioned in sacred texts, to follow its natural course (KTU 1978: 69). It was agreed during the First Advisory Panel meeting that "*no symbol should be adopted in the design of the Sacred Garden*" (UN 1971: 5), in order to emphasize the universal nature of the development of the site and to avoid affiliation to any specific Buddhist tradition. The basic principle of the Sacred Area design was to recreate a peaceful, natural environment "*by prohibiting the construction of new structures and with the exception of the Asoka Pillar and the archaeological findings such as walls and bases*" (KTU 1972: 9). All modern buildings were to be removed, including the pilgrim rest-houses, school, dispensary and malaria post, Lumbini Bazaar, two monasteries built since the mid-1950s and Mahendra Pillar built to commemorate the King's visit (Figure 2.9-2.10). Plans were made to relocate all these buildings, either in the Cultural Zone or in the Monastic Zone (KTU 1978: 61). In 1978, the archaeological investigations were still on-going in the Sacred Garden and, therefore, the LMP recommended research to continue at the site and future designs, conservation and presentation to be adapted, based on the archaeological findings (KTU 1978: 68-9).

The project implementation and its cost were initially divided in three phases, with most activities planned to be finished by 1985 (Table 2.2), for a total budget of just under 20 million USD. However, nearly 40 years later, the implementation of the project is still not finished. Based on the 2013 UNESCO-UNDP review of the LMP implementation status, the cost has already reached at least 40 million USD (excluding all administrative costs and preparation/conception costs) and an additional 63 million USD was still required to complete it. Many factors have delayed the implementation of the LMP, including early delays and increases in the project cost but also management problems. Moreover, the wider economic and political contexts in Nepal also contributed to the slow implementation of the project and as a result the loss of the momentum that began with the visit of U Thant.

Prior to discussing the implementation phases of the LMP in the following chapter, the next section reviews and compares the final outline of the LMP with the initial social and economic objectives of the project as defined in the early missions and conception phase documents.



1. Ashoka Pillar
2. Ruined Walls
3. Maya Devi Temple
4. Restored Tank
5. Earthmounds
6. Buddha Temple
7. Old Rest House
8. New Rest House
9. High School
10. Post Office
11. King's Pillar
12. Malaria Post
13. Dispensary
14. Bazaar
15. Tube Well

Figure 2.9 : Sketch plan of known ancient and modern buildings in the Sacred Garden in 1969 (Source: Author, based on UN 1970: 7)

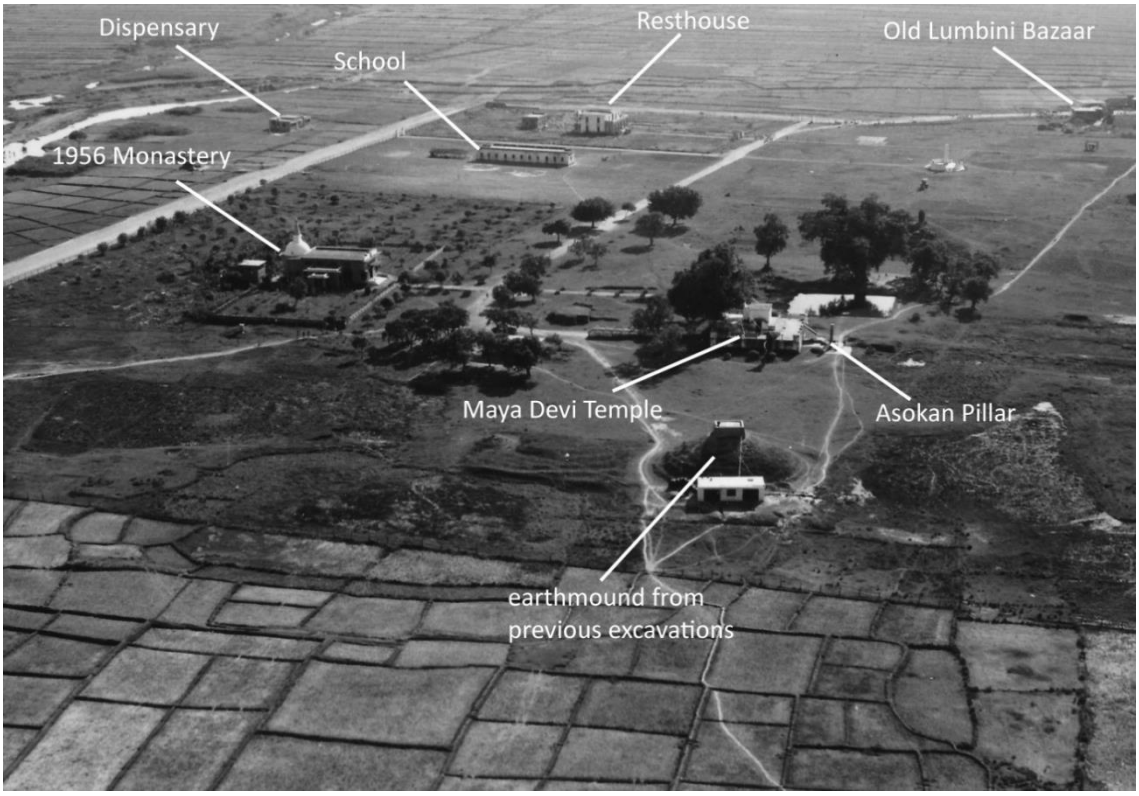


Figure 2.10 : Aerial view of the Lumbini Sacred Garden Area from the north, in 1969, by British archaeologist, F.R. Allchin
Copyright: B. Allchin

Table 2.2 : Initial phasing of the Lumbini Master Plan Implementation (KTU 1978: 73-4)	
Phase 1 (up to 1980)	Phase 2 (1980-1985)
• Tourist Information Center 100% • Administration Center 50% • Tourist Accommodation 50% • Pilgrim Accommodation 65% • Medical Center 35% • High School 100% • Retails & Service Facilities 35%LTURAL CENTER • Museum 35% • Auditorium 100% CENTRAL LINK • Central Canal 100% • Pedestrian Space 65% • Service Facilities 50% • Circular shaped levee link 100% • Major pedestrian path 100% • Protection banking of Sacred Area 100%EA • West Monastic Plaza 100% • East Monastic Plaza 100% • Main Access with branch canal 100% • West Monastic Lots 30% • East Monastic Lots 30%RES • Bhairahawa-Lumbini road 100% • Peripheral road 100% • Major service roads 100% • West Monastic Lots 30% • Utilities	"The Second Phase includes the development of all development carried over from and complementary to the First Phase: This will include the 80% of the Monastic Area to be undertaken as an independent development. The development of the Sacred Garden will depend on the progress of the archaeological excavation works" Phase 3 (After 1985) 1) Extension in the Lumbini Centre and the Cultural Centre 2) Completion of the Monastic Areas and Sacred Garden 3) Planting in the Entire Site

2.4.3. Linking the Lumbini Master Plan and the social and economic orientation of the site development

In the earlier mission reports and conception documents from the early 1970s, social and economic development was identified as one of the four objectives of the site development (UN 1971: 2; KTU 1972: 1; UN 1979: 7-8). The argument for the social and economic orientation of the project and the coordination with regional development plans was dual: on one hand, it was expected that the development of infrastructure and facilities would involve some inconvenience and negative impact on local communities, notably for the villages that would have to be resettled (KTU 1972: 6); on the other hand, the impact of increasing tourism and the development of infrastructure would offer new opportunities for the local agricultural sector which could be built on to stimulate economic growth through gradual upgrading of the agricultural economy and appropriate regional planning (UN 1971: 2; KTU 1976: 7). A variety of responses to these two aspects were provided in the conception and preparation phases to mitigate the former and enhance the latter.

In terms of the negative impacts on communities, the KTU team identified four main potential negative impacts (KTU 1972: 6, 12; KTU 1976: 7):

- Restricted access to water resources for irrigation due to the flood control infrastructure developed to protect the archaeological site;
- Loss of agricultural land, due to the land acquisition within the one by three miles Project Area;
- Restriction of activities in the wider three by three and five by five miles buffer zones which would prevent the development of certain industries in the area which could have generated income and employment for local residents;
- Relocation of villages outside the one by three miles Project Area and destruction of buildings with important social value for local communities in the Sacred Garden (including a health post and a school).

Most international consultants on the project, including the first UN mission, the 1969 UNDP mission (Allchin and Matsushita 1969) and the KTU team were thus aware of potential negative impacts: "b*y incorporating these concerns into the development plan we can hopefully safeguard and/or improve these areas*" (KTU 1972: 6). Tables 2.3-2.4 present the data which was used in the KTU report and closely relate to land acquisition. In his report, Okada (1970b) gives several recommendations to integrate communities and their needs in the site development process. While his recommendation to avoid village resettlement and minimise

land acquisition within the Project Area was integrated in an earlier version of the LMP (KTU 1976; see Okada 1970b), it was eventually reviewed and changed in the following plans, as it was deemed among other changes as eroding "*the simplicity and clarity of the original 1972 design*" (KTU 1977: 1, 4).

Table 2.3 : Number of inhabitants and size of agricultural inside the Project Area for each village clusters (KTU 1976)

Village Clusters	Inhabitants	Double-cropping area	Double-cropping Area/inhabitant
Harnampur-Parsatola-Parsa	650	55.4ha	0.09ha
Harwatola	50	10.8ha	0.22ha
Madnagar	110	26.8ha	0.24ha
Kirtipur	240	43.3ha	0.18ha
Total	1,500	136.3ha	--

Table 2.4 : Agricultural production of Rupandehi District (KTU 1976)

Exploitation	Cultivated area/Total agricultural area
Paddy	77.0%
Wheat	9.0%
Maize	7.8%
Oil Seed	2.3%
Sugar Cane	1.7%
Potato	1.0%
Millet/Busk Wheat	0.8%
Barley	0.6%

Among the key recommendations of the report were the improvement of the transportation and the irrigation networks, diversification of the agricultural and farming productions, targeted towards the new pilgrim and tourist markets. Moreover, Okada (1970b) proposed specific investments in education and training to build local capacity, including vocational training focused on trade and agriculture, but also language skills and literacy. Among all these recommendations, only the first two linked to transportation and irrigation were addressed directly by the LMP project, with notably the upgrading of the Bhairahawa-Lumbini-Taulihawa

road and the Bhairahawa Airport. As irrigation was identified as a central issue by local residents, Okada (1970b: 109) recommended that "*a careful study be made to achieve both objectives: keeping the main controlled area dry and providing water for the farmers*". This idea was reflected in the KTU reports (1976: 6) without, however, defining clear measures to meet the latter objectives. The KTU team's suggestion was that the water overflow from the newly built water tanks to keep the controlled area dry be used for agricultural irrigation (KTU 1976, 1972: 12).

Ultimately the ideas which remained were the original suggestion of linking the development of Lumbini to regional development. The following quotes from different planning documents highlight the regular references to this element:

"The basic land use structure is to remain largely as it exists at present. Gradual upgrading of the agricultural economy of the region would also be emphasized, to stimulate economic growth as part of the overall development in the adjoining area" (UN 1971, p 2).

"*It was recommended that the interdependent between the Lumbini Development Programme, the Gandaki economic development and the Nepalese national development be fully explored, and that priorities be established so that the Lumbini Development Programme be integrated in the wider economic context*" (KTU 1978: 8).

However, beyond these recommendations, no other action or clear directives were given in the LMP regarding how to integrate the development of Lumbini in regional planning. The only regional components of the plan, beyond the Project Area, were the Bhairahawa Airport upgrade and the Bhairahawa-Lumbini-Taulihawa road connecting the site with the East-West Highway and, as a result, with both Kathmandu and India (UN 1970; 1978). These facilitated transport of visitors, people and goods in the area and also attracted new industries along the main transportation axis. However, this infrastructure did not address the market leakage identified in Alkjaer's tourism and pilgrimage market analysis that "*the natural itinerary of Buddhist pilgrims would be, as it is at the moment, to land in India, undertake a circular tour to the various Buddhist holy places there plus a brief excursion to Lumbini and then depart again from India*" (Alkjaer 1968: 28). Unlike current development and tourism practices, there was also no specific provision made to ensure that local producers would be linked to the tourism market. No consideration or potential solution was thus provided to the issues and concerns raised by earlier missions including on the risk of leakages linked to visitors' routes and local supplies.

Tourism planning mainly consisted of forecasting the evolution of tourism based on visitor numbers at the time and arrival trends in Nepal. This exercise formed the basis to estimate the capacity required in the new infrastructure and facilities and impacts of the project. Visitor figures for the mid-1960s were provided by Okada (1970b: 44) and suggested a peak in 1964, with 1,023 visitors and only 834 in 1966. However, no data is available for the following years in the LMP design reports on visitor numbers in Lumbini. The KTU figures were based on national foreign tourist arrival data, including their mode of transportation to Nepal (by air or land). This data was then used to forecast evolution of national arrivals until 1985. Assuming that 10% of air travellers and 80% of land travellers would visit Lumbini, the KTU team estimated the evolution of visitor numbers in Lumbini to 44,700 by 1980 and 89,700 by 1985 (Appendix 5). Additional assumptions in the LMP regarded the proportion that would visit in the high or low seasons. It was thus assumed that 70% of foreign visitors would come between October and February and 30% would visit between March and April. To estimate bed capacity, it was assumed that 75% of visitors would stay overnight in Lumbini. These evaluations of visitor numbers, annual fluctuations and length of stay were used to provide an estimate of the economic contribution of the LMP, notably for local agricultural production. The team therefore considered that the "r*ealization of the Lumbini project would supply, including 50% of the double cropping area of Kirtipur, Madnagar and Harwatola, a great deal of agricultural land*" (KTU 1976: 7). This contribution, however, was dependent on how closely the evolution of tourism during the implementation phase aligned with the team's estimates, especially regarding visitor numbers and length of stay. The following chapter (Section 3.4) discusses in more detail tourism development in Lumbini after 1978, indicating significant disparities with the team's forecasts.

During the conception phases, many reports and documents referred to ambitious social and economic objectives for the site development. However, during the transition from the conception to the preparation phase of the LMP, these objectives appear to have been driven to the background as physical planning and the design of the infrastructure were prioritised. This increased emphasis was reflected in the UN comments and Tripartite review of the preliminary plan, in 1977 (KTU 1977: 4), and the following KTU reports (1977, 1978) which focused increasingly on the infrastructure design, rather than mitigations. The final 1978 LMP report provided little mention of local communities, local economy, ways to enhance their participation and benefits nor ways to mitigate the potential negative impacts identified in the earlier reports and documents. The data presented in the final outline on local communities was limited to household numbers and agricultural productions which offered little information to identify key priorities for linking the site with local development. Furthermore, the team did not

collect any data on visitors at the site, their forecasts being based on national tourism data and as a result, failed to consider concerns raised by international experts (Alkjaer 1968) and government officials (Joury 1969) on the existing Buddhist pilgrimage market, with strong barriers to travels faced by many Buddhist communities, and the potential market failure in Lumbini if the site was not integrated within a wider national tourism circuit. Overall, the final outline provided no mechanism to ensure integration within local and regional development, including links between tourism activities and traditional sectors like agriculture, and participation of local communities in the project implementation and tourism development.

2.5. Conclusion

Following the first objective of the thesis, this chapter reviewed the conception and preparation phases of the LMP, focusing on the factors which have influenced the definition of the social and economic objectives of the LMP and the role that the site would play in regional and local development. From the initial stages, the project had a strong regional development component, with the site development acting as a driver for regional planning and development (Kobe et al. 1968: 1). By 1971, the ICDL had agreed on four key components for the project, including the protection of the archaeological and sacred heritage at the site, the enhancement of the pilgrimage and visitor experience, the development of the tourism industry and the promotion of economic and social development in the surrounding region. Based on the project archives from UN agencies and the Nepal Government, there were limited mechanisms that were put in place to ensure that the site development would trigger economic and social development around Lumbini. Between the conception phase and the preparation of the Plan, the development objective appears to fall in the background of the project, as attention focused on the physical planning and design. As a result, the social and economic objectives of the LMP were never clearly defined in any of the agreed documents nor in the 1978 final design.

The development component of the site development therefore lacked vision and direction, without clear objectives, activities and monitoring/evaluation mechanisms to ensure that the project implementation would provide economic and social benefits for local communities. The project integrated many international stakeholders, including major inter-governmental organisations and the international Buddhist community, and key figures within the Nepal Government. By contrast, there was limited consultation and coordination with other development agencies working in the region, with staff from the different Government agencies and local communities. The final design of the LMP has thus emerged as a fairly isolated project, not responding to local concerns nor integrated within regional development nor national tourism planning programmes. Early concerns raised by several experts and stakeholders were

ultimately not addressed in the final design. The following chapter focuses on the implementation of the plan, looking at how these limitations have impacted on the social and economic impact of the site development since 1978. It also considers new challenges emerging in the implementation phase which have induced delays in its completion and affected the social and economic impact of the project at the local level.

CHAPTER 3: THE LUMBINI MASTER PLAN IMPLEMENTATION, TOURISM DEVELOPMENT AND LOCAL COMMUNITIES (1978-2018)

3.1. Introduction

The previous chapter reviewed the phases of conception and preparation of the LMP and the role(s) of the diverse international, national and local actors in designing the development of Lumbini, its objectives and influencing its implementation. This chapter focuses on the activities undertaken for the implementation of the LMP and how local communities were integrated within these changes and developments. This chapter meets the second objective of the thesis, to discuss the implementation phase of the LMP, between 1978 until present, in light of the social and economic objectives formulated in the conception and preparation phases to evaluate some of the successes and failures of the LMP.

The first section of this chapter documents the activities undertaken as part of the implementation of the LMP until present, based on the project records available from the UN, UNESCO, UNDP archives and other documents from the Government of Nepal and LDT. This initial section notably discusses the long delays that have affected the implementation of the plan which was intended to be essentially completed by 1985 but which is still on-going today. The second section focuses on the implementation of the social and economic components of the plan and the mitigation actions that were recommended by the design team. It also considers the interactions with local communities, during the implementation phase and issues that have emerged during this period. The third section focuses on documenting the development of tourism and pilgrimage activities in Lumbini since the implementation of the LMP. Visitor numbers collected by the LDT provided a long-term trend on the development of tourism and pilgrimage. Administrative data on the tourism industry, published documents, interviews and consultant reports from different tourism missions and projects provided some additional data on the characteristics of visitors and current visitation patterns. The latter documents also gave insights into the nature of the tourism industry and some of the challenges it has faced, notably poor linkages with the local supply chain and important leakages of tourism revenues. The evidence, however, remains limited and is not sufficient to trace and understand the complex dynamics that affect the social and economic impact of Lumbini visitors on the local communities.

3.2. The implementation of the Lumbini Master Plan (1978-2018)

3.2.1. The early implementation of the Lumbini Master Plan: Activities and initial difficulties (1978-1996)

Appendix 4 provides a detailed and chronological table of activities that have been undertaken for the implementation of the LMP components until present. According to the 2006 UNESCO review of the LMP implementation, less than 10% of the plan had been implemented by 1985 when the project was originally meant to be in its final stages (Rai 2006: 39). The main elements completed by then were the regional components, the upgrading of the airport and the Bhairahawa-Lumbini-Taulihawa road which had started before the final design had been approved (ibid.). In 1985, the current site manager, the LDT, replaced the Lumbini Development Committee, under the Lumbini Development Act (HMG 1985, 2003). In the following ten years (1986-1996), some of the iconic buildings of the Cultural Zone were completed with funding from various international donors, including the Library and Lumbini International Research Centre (LIRI), funded by Reiyukai (Japan), and the Museum built with a donation from the Indian Government but also two of the accommodation facilities, the Sri Lankan pilgrim rest-house and the high-end hotel, built by Hotel Hokke Club (Gurung 1998). During the same period the construction of monasteries started. One of the main activities which took place between 1992 and 1996, was the excavation of the Maya Devi Temple by the DOA, the LDT and the Japanese Buddhist Federation during which the 'Marker Stone' was uncovered (UNESCO 2013: 73). Associated with the Mauryan phase of the temple construction, the stone has been interpreted by some as marking the exact birthplace of the Buddha and is now kept *in situ* and visible to visitors (Bidari 2007: 183).

The implementation of the project was entirely dependent financially on international assistance and voluntary contributions (UN 1979). The Government of Nepal agreed to provide the land, establish a managing body and also funded early archaeological investigations, which together had already represented an expenditure of seven million USD by 1983 (ICDL 1983: 2), but each component of the plan was to be funded by one or several donors. The responsibility for the fundraising campaign was left with the ICDL and National Committees. Chairmen of ICDL repeatedly raised concerns over the limited resources of the ICDL and the Committees to manage a large-scale fundraising campaign including in the 1984 ICDL meeting: *"no inter-governmental organisation or international organisation has the operational capacity for launching and managing the needed fund-raising programmes and activities on a continued basis and in a systematic manner. Furthermore, no single government, private institution, individual nor national Lumbini Committee could be responsible for and capable of the planning,*

programming and managing of fund-raising activities at international and regional levels" (ICDL 1984: 4). However, despite limited resources and organisational issues, the fundraising campaign had raised 17 million USD by 1984, the funds originally required for the first phase of implementation. Table 3.1 provides further details on the type of donors that the fundraising campaign attracted from 1970 to 1998. They were primarily government institutions and Buddhist organisations although individual donors had also made significant contributions.

Table 3.1 : Donations to the Completion of the LMP up to 1998

Year of first donation	Type of donor	Amount (NPR)	Percent of total donations
1971/2	Individuals	8,368,121	6.9%
1972/3	Organisations	58,222,564	47.7%
1973/4	Government	52,708,228	43.2%
1992/3	Donation box	2,567,389	2.1%
1995/6	Information Centre	217,225	0.2%
	Total	122,083,527	100%

Source: LDT 1998 (taken from Gurung 1998: 30)

One of the main challenges for the successive fundraising campaigns has been the exponential increase in the estimated cost of the project: from under six million USD in 1970 (UN 1970), it had gone up to just under 20 million USD, by the second appeal for international assistance in 1979 (UN 1979), and increased to 55 million USD by 1981 when the detailing of individual architectural designs was finalised by KTU (1981) (Table 3.2). By then, inflation in Nepal had also reached a peak, the annual rate being above 10% for nearly 15 years after 1980 (Osmani and Bajracharya 2007: 10-1). Therefore, by the time the fundraising campaign had almost reached the initial budget of 20 million USD for the LMP implementation, in 1984, the re-estimation of the cost based on the new inflation rate indicated that the cost had reached 62 million USD at the 1984 prices and were forecasted to reach 80 million USD by the new completion date fixed to 1990 (ICDL 1984: 6). The fundraising campaign has thus never been able to meet the rapid increase in the project cost. Throughout its implementation, the project has been chasing voluntary contributions from government and large international organisations to complete the components of the LMP. Funding the initial utility and water management work which were required before the construction of the architectural components was particularly challenging.

With constantly increasing costs and early delays (Table 3.2), ICDL and the National Committees faced the challenge to maintain and revive international interest for a project which had little tangible developments to show donors in the early years. In return, the difficulty to find donors and funding caused additional delays in the project implementation, which led to increasing costs.

Table 3.2 : Evolution of the project cost estimates in USD, based on the total of each component*

Type of activity	KTU (1978)	KTU (1981)	LDT (1989)**	LDT (2000)**	UNESCO/UNDP (2013)
Water Management	3,745,000	400,000	764,000	342,000	1,350,000
Site Work and Landscaping	6,155,000	16,344,000	19,989,000	24,424,000	24,397,000
Architectural Work	4,240,000	31,970,000	24,359,000	32,035,000	32,978,000
Utility Work	2,420,000	6,233,000	8,572,000	13,964,000	21,715,000
Afforestation	3,000,000	n/a	n/a	n/a	70,000
Arch. Research and Conservation	n/a	n/a	n/a	n/a	1,616,000
TOTAL	**19,560,000**	**54,947,000**	**53,684,000**	**70,765,000**	**80,510,000**

*all estimates exclude the costs of construction for the monasteries and administrative costs
** based on summary tables provided in Rai (2006)

While this context made the management of the project already difficult for the Lumbini Development Committee and later for the LDT, additional management issues have also hampered the project implementation. The intensive search for funding has encouraged the LDT to accept donations for work that was not planned under the LMP, thus dispersing resources but also affecting the coherence of the design itself. The LDT has been particularly criticised for a lack of accountability and continuity in its policies, due notably to the frequent changes in the decision-making positions (Gurung 1998; Rai 2006). While the Patron of LDT was formerly a member of the royal family, and now the Prime Minister, in practice, the two main decisional bodies within the LDT are the Lumbini Development Council which formulates the LDT's policy objectives, activities and budget and the Executive Committee in charge of implementing the Council's work plan (Weise 2006: 49-51; Figure 3.1). The key positions in both the Council and the Committee have been the Chairman, who is the Minister responsible for Culture (presently Ministry of Culture, Tourism and Civil Aviation), the Vice Chairman, the Treasurer and the Member-Secretary. In particular, the Vice-Chairman and Member-Secretary, in charge of deter-

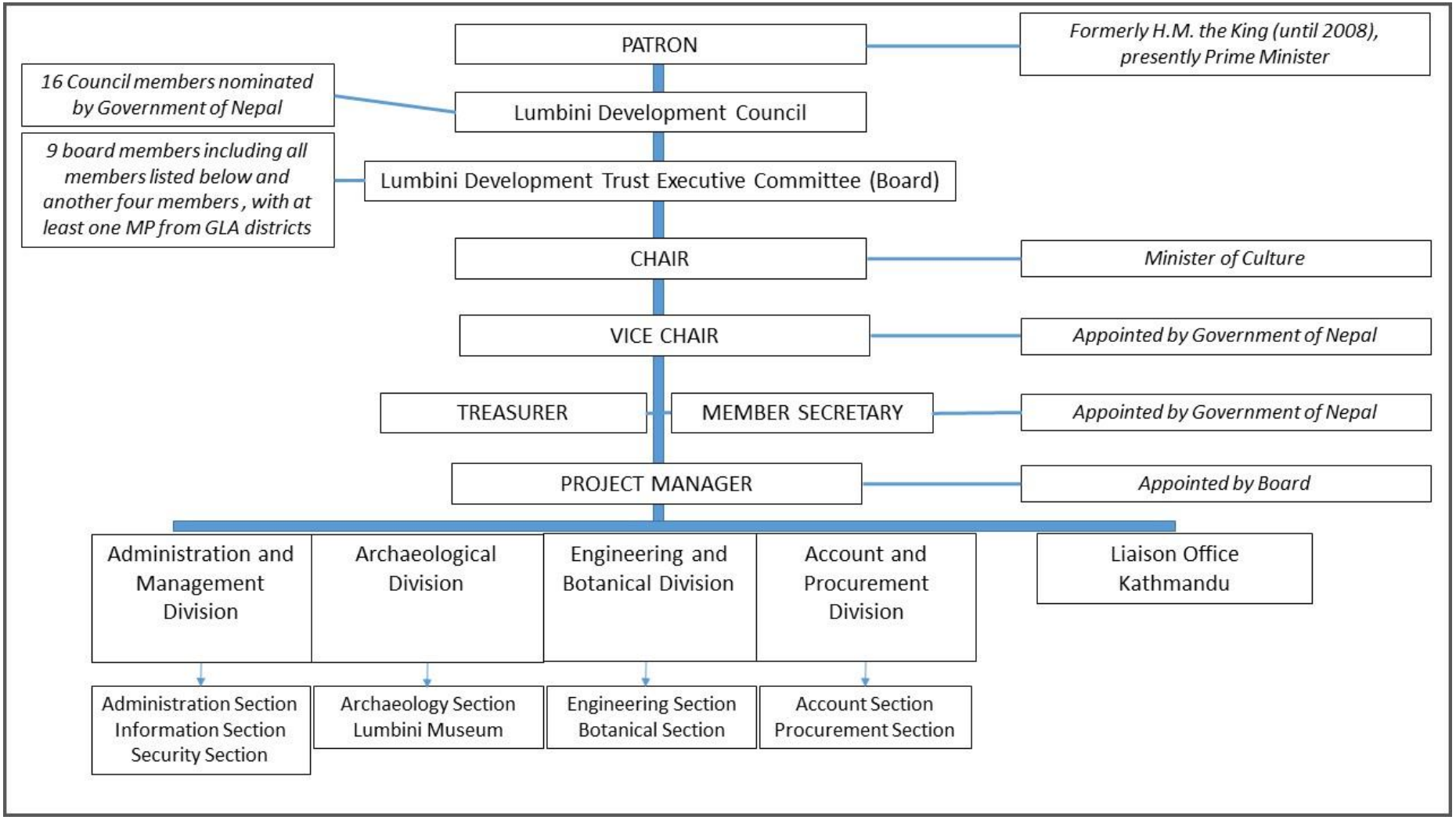


Figure 3.1 : Organigram of the LDT management and decision-making structure (adapted from LDT 2018a)

mining the annual programme and budget for activities, have played a determinant role in the LMP implementation, although recent changes have tended to reduce the influence of the former. All these key positions, except the Treasurer, have been nominated by the Government and the appointments have often been short, usually lasting only a few years (ibid.). In this context, there has been no or limited follow-up on decisions, and therefore a lack of continuity in the policies followed by the LDT (Rai 2006: 43). The existing management structure has also been lacking "*a cycle of planning, implementation, monitoring, evaluation and feedback […] [and] an accountable, transparent description of how the management system functions*" (Weise 2006: 57). However, some of these issues did start to be addressed after the inscription of the site on the UNESCO World Heritage list.

3.2.2. The implementation of the Lumbini Master Plan under the World Heritage designation (1997-2018)

Another important turning point in the modern history of Lumbini was the inscription of the archaeological site on the UNESCO's World Heritage list in 1997. The inscription had been a long-term project, with enquiries already made about the potential listing of Lumbini at the 1984 ICDL meeting (ICDL 1984: 5). In 1993, a first nomination dossier was presented which included two other local sites, Tilaurakot-Kapilavastu, considered in Nepal as the childhood home of the Buddha, and Ramagrama, regarded as the only unopened original relic stupa (ICOMOS 1993: 80). But the application was deferred due to the lack of sufficient knowledge and conservation and management provisions for these two sites (WHC 1993: 38). Consequently, when the dossier was presented again to the World Heritage Committee, only Lumbini was included, leaving the possibility open for the future extension of the property to include other local sites associated to the life and work of the Buddha (ICOMOS 1997: 80).

Lumbini's nomination dossier builds on the work undertaken as part of the LMP, including extensive archaeological investigations undertaken by the DoA (Government of Nepal), Lumbini Development Committee, LDT and, between 1992 and 1996, the Japanese Buddhist Federation. The dossier also benefited from the existence of the LMP Project Area which could act as a buffer zone where "*there is strict control over any form of development within the entire complex*" (ICOMOS 1997: 80). The site was inscribed under criteria iii and vi: "*As the birthplace of the Lord Buddha, the sacred area of Lumbini is one of the holiest places of one of the world's great religions, and its remains contain important evidence about the very nature of Buddhist pilgrimage centres from a very early period*" (WHC 1997: 12-3). Lumbini is therefore listed both for its tangible archaeological remains but also for their intangible and spiritual values. Currently the area included within the World Heritage nomination is less than two hectares with a buffer

zone of 23 hectares, delimited by the internal boundary of the circular levee enclosing the Sacred Garden area (WHC 2012). The WHS includes the following archaeological features:

- "*Shakya Tank (or Nativity site)*
- *Mayadevi temple […]*
- *An inscribed Ashoka pillar of 249 B.C. that testifies to the authenticity of the site Lumbini where Lord Buddha was born.*
- *Monasteries dating from third century B.C. to fifth century A.D.*
- *Votive stupas built in different periods dating from third century BC to fifteenth century AD*" (WHC 1997: 5)

The listed property does not include the Ancient Village Mound located within the buffer zone. This inscription marked a new era for the management of Lumbini, with new opportunities but also additional pressure for the management and development at the site to meet international standards, as set by the World Heritage institutions. The construction of a shelter over the remains of the Maya Devi Temple, in 2002, following the 1992-1996 excavations was the first major development which required negotiations between the different national, local and international stakeholders. After the completion of the excavations in the temple in 1996, the remains had been left exposed, with a temporary corrugated iron shelter built over them. While the Japanese Buddhist Federation wanted to rebury the remains of the temple, the LDT wanted to keep them visible for visitors and was awaiting a donor to rebuild a modern temple. By 1999, the Government of Nepal announced its decision to fund the construction of the shelter with its own resources (WHC 1999: 52-3). The World Heritage Committee requested the State Party to wait for a mission to be sent to advise on the best approach to guarantee the preservation of the Outstanding Universal Values (ibid.). Two years later, however, none of the designs suggested for the shelter had met the criteria identified by the 2000 UNESCO mission (Coningham and Milou 2000). Under pressure from visitors and Buddhist organisations to provide adequate facilities for worship at the site, the Government of Nepal and LDT decided to move forward with the construction of the shelter in 2002 (Figure 3.2-3.3), despite the "*grave concern over the intrusive and heavy construction of the new Mayadevi Temple*" expressed by the World Heritage Committee (WHC 2002: 49).

While the Government made adjustment to the shelter design to mitigate negative impacts identified by international missions, including the redesign of the original staircase (Weise 2008: 11), the outcome of the negotiations between the World Heritage institutions and the State Party over a modern shelter for the Maya Devi Temple has generally been regarded as unsatis-

Figure 3.2 : View of the modern shelter over the ancient Maya Devi temple and the Asokan Pillar to the right
(Photo: Author, March 2017)

Figure 3.3 : View of the Maya Devi Temple remains inside the modern shelter, with visitors queueing to see the 'Marker Stone'. The part of the walkway visible on the photo had just been added as an attempt to improve visitor mobility inside.
(Photo: Author, February 2018)

factory. The final design has neither met international criteria nor satisfied visitors' expectations and experiences (UNESCO 2013) and is already reaching its carrying capacity limit as the number of visitors in Lumbini increases. However, this event has also initiated a reflection on the limitations of the current management framework for the site between both parties, with regular international missions sent by UNESCO/World Heritage Centre/ICOMOS and almost annual reference to Lumbini at the World Heritage Committee meetings from 1999 until 2014. The key developments emerging from these discussions have been:

- the preparation of an Integrated Management Framework (IMF) for the site between 2008-2013, by UNESCO consultant Kai Weise, to complement the current management provisions which are: The Ancient Monument Preservation Act (1956), the LMP (1978), the Lumbini Development Act (1985). The framework is currently awaiting approval from the Government of Nepal;
- the *Strengthening the Conservation and Management of Lumbini, birthplace of the Lord Buddha, World Heritage Property* project, funded by the Japanese Funds-in-Trust to UNESCO (UNESCO/JFIT). The first phase of the project ran in Lumbini between 2010 and 2013 with a budget of 791,000 USD. It was followed by a second (2014-2017) and a third phase (2018-2021), both covering the Greater Lumbini Area (GLA), where the sites of Tilaurakot-Kapilavastu and Ramagrama are located, for a budget of 825,000 USD (Phase 2) and 641,000 USD (Phase 3).

The latter project has had three components: 1) review of Kenzo Tange Master Plan, 2) conservation of archaeological remains and 3) archaeological investigations within the Sacred Zone (Phase 1) and at other archaeological sites in the wider region (Phases 2 and 3), with the preparation of archaeological risk maps for the development of infrastructure. All these components informed the IMF (Weise 2013) but also led to some developments within the Sacred Garden area, including the construction of new walkways and meditation platforms for visitors and conservation work focusing on the temple, the 'Marker Stone', the Nativity Sculpture and the Asokan Pillar. These two projects have also revived the reflections on the development of the wider region. In its later Phase 2 and 3, the UNESCO/JFIT project (2014-present) has widened its area of action to include archaeological, planning and conservation activities at key sites within the wider GLA, including Tilaurakot-Kapilavastu, and other sites in neighbouring Kapilbastu district, and Ramagrama. The IMF, when approved by the Government of Nepal, would also redefine the mission of the LDT, which is currently centered on the completion of the LMP, into the following:

"*The primary objective of the Integrated Management Process of Lumbini, the Birthplace of the Lord Buddha is to protect the Outstanding Universal Value of the World Heritage property as well as to ensure that Lumbini becomes the catalyst for the sustainable development of the Historic Buddhist Region* [Greater Lumbini Area]" (Weise 2013: 7).

These recent projects have to a certain extent revitalized development in Lumbini and are in the process of adapting the management of Lumbini and the general implementation of the LMP to presents needs. Prior to these projects, the implementation of the LMP had indeed slowed down, particularly as the mid-1990s saw the start of the Maoist Insurrection in Nepal (Whelpton 2005; Thapa and Sijapati 2004). The uprising ultimately affected the Tarai among other regions of Nepal and lasted until 2006 (Kergoat 2007: 135). During that period, fewer projects started in Lumbini although some of the on-going projects particularly in the Monastic Zone were completed (see Appendix 4). Since the late 2000s, however, the implementation of the LMP has accelerated. In the Cultural Zone, the final mid-range accommodation opened in 2009, while the Sri Lankan rest-house that had been closed for several decades was renovated and opened in 2014 (LDT 2015). The main construction work for the LDT offices and Visitor Centre buildings has just been completed in 2018. Many developments have taken place in the central link area, with the completion of the canal and walkways (except for boat stations) (UNESCO and UNDP 2013: 24). All plots have been leased in the Monastic Zone and most monasteries have reached or are nearing completion. The remaining components in the Cultural Zone include most of the general service facilities like banks, posts and telephones, the high school complex and the medical centre.

3.2.3. Conclusion

The chronological review of the activities undertaken as part of the of the implementation of the LMP reveals certain political, economic and organisational factors that have affected the implementation of the design, causing delays and exponential increase in the cost of the project. Beyond the project's control, the general political and economic instabilities throughout the period, including rapid inflation in the 1980s and 1990s, have caused delays and rapid increase in the cost of the project from the initial estimated six million USD in 1970 to an estimated cost of nearly 100 million USD by 2013. Structural factors, including the lack of resources for the fundraising campaign and later to complete the implementation of the plan, the lack of a clear, transparent and accountable management structure, with the decision-making bodies closely affected by political instabilities in Nepal during the period. The limited resources have also

occasionally been diverted from the completion of the LMP due to external pressure and donors' side projects.

In the last 15 years, the democratic transition and progressive stabilisation of the regional and national political context, the increased presence of UNESCO and the revival of interest from the international community and national stakeholders have all contributed to revitalise the implementation of the project. On 30th April 2018, the LDT announced the objective to complete the LMP implementation within the next two years, by 2020 (Samiti 2018). The site and its management are thus reaching a period of transition where the mission, aim and objective of the site management need to be redefined and lessons learnt from the LMP experience.

The following section discusses how the implementation phase has translated the local social and economic objectives formulated in the conception and preparation phases of the LMP.

3.3. The development of the Project Area and local communities

3.3.1. Local development during the Lumbini Master Plan implementation phase (1978-2018)

In the 1969 UNDP mission report, the international consultants, Allchin and Matsushita, described the surroundings of Lumbini as clusters of small agricultural villages that had "*changed little in the last 2500 years*" (Allchin and Matsushita 1969: 10). By 2013, however, the surrounding Village Development Committees (VDCs) had merged to form the Lumbini Cultural Municipality. The latter has expanded again under the new administrative structure introduced since the ratification of the Constitution in 2015. Over the course of the LMP conception, preparation and implementation, there has been significant social and economic changes in the local area, especially related to population demographics and public administration but also to the local economic context. Figure 3.4 provides a map of the area around the LMP, with the different administrative boundaries, between the previous VDCs and current wards, within the Lumbini Cultural Municipality. Overall, the National Population Census, conducted every 10 years, indicates a constant increase in the total population number around the LMP with a 231% increase between 1971 and 2011 (Figure 3.5), from a total population of 18,481 in the seven surrounding VDCs to 61,157 by 2011. The increase has been particularly significant in the 1990s with the population nearly doubling during this decade. Areas that were particularly affected include the villages to the south west of the LMP towards the Indian border in Bhagwanpur and Lumbini Adarsha former VDCs, to the west and along the Bhairahawa-Lumbini-Tilaurakot road in the former Tenuhawa VDC and to the north in Ekala area. It is unclear whether this population increase can be directly linked to the LMP development. It is, however, closely related to the

wider regional context discussed in the previous chapter and inward migration from Nepal, India and other South Asian countries to the Tarai region (Section 2.3.2).

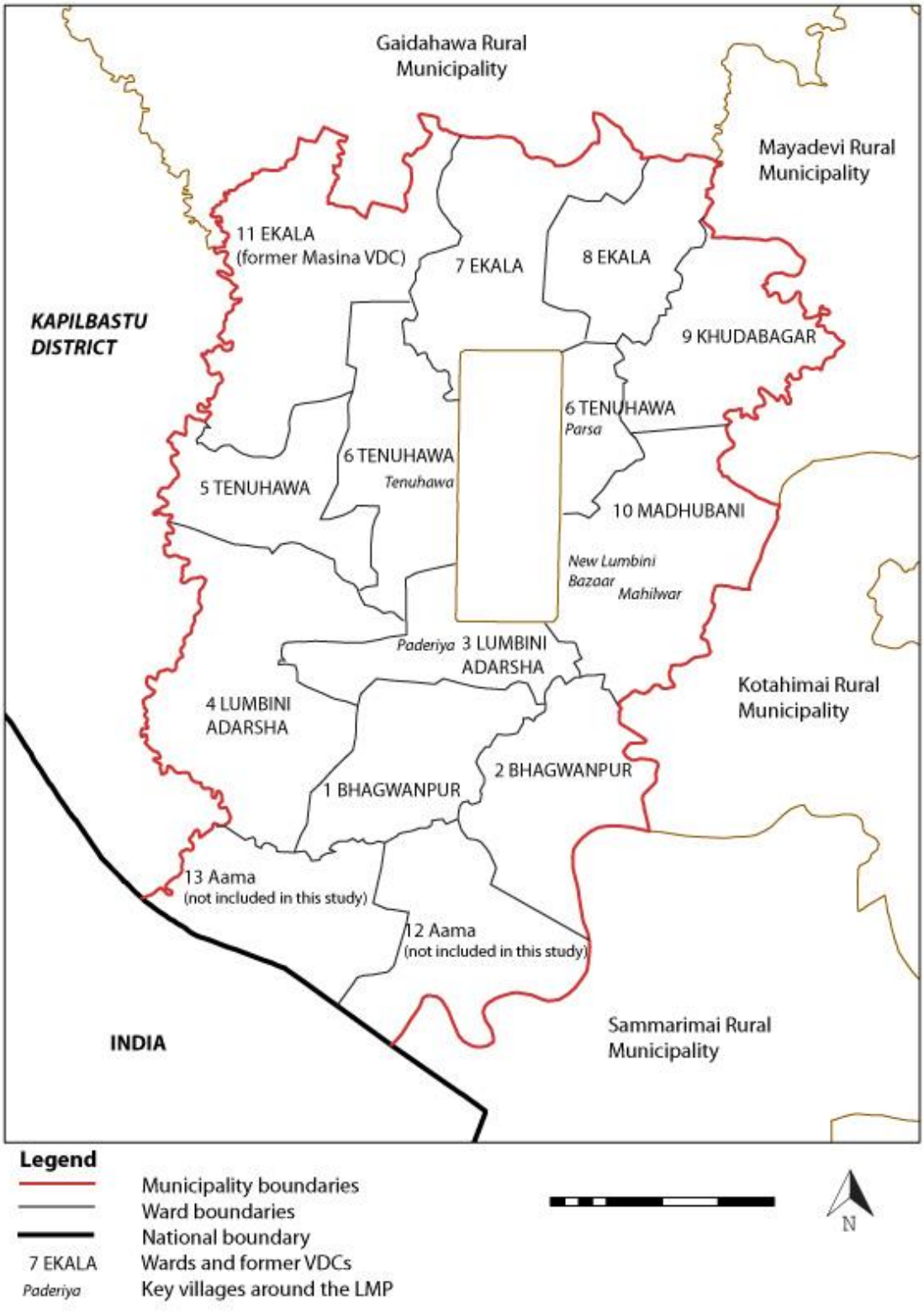
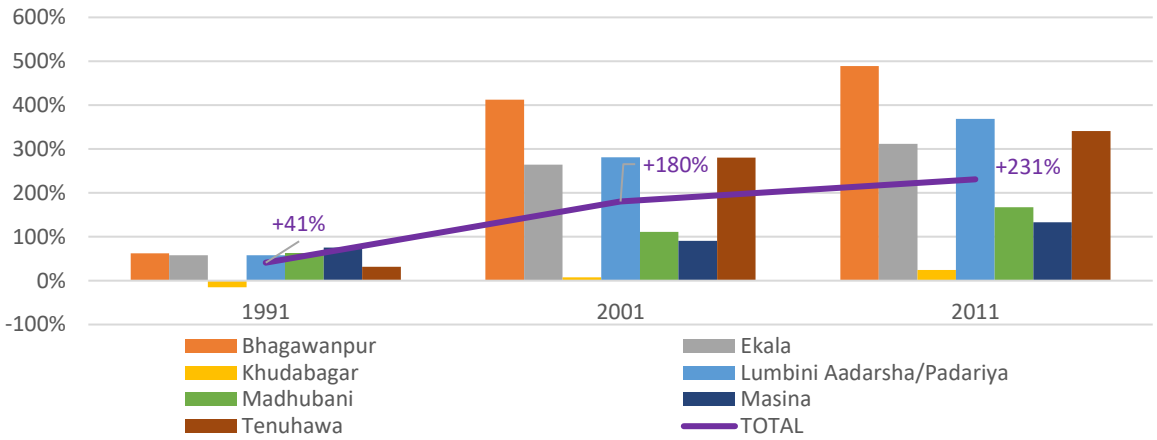


Figure 3.4 : Map of Lumbini Cultural Municipality and ward divisions as of 2017
(Source: Author, adapted from Survey Department and Lumbini Cultural Municipality 2017)

Figure 3.5 : Population growth rate in the former Village Development Committees around the LMP since 1971
(based on National Population Censuses)*



* The 1981 Population Census provides population data based on a different division of VDCs within Rupandehi District. The data cannot therefore be compared with previous or later years

The local economy was and has remained primarily based on agriculture. While there is no data available at the local level, the Population Censuses have provided figures for Rupandehi District which have reflected the centrality of the agricultural sector in the local and regional economy with 58% of the active population working in the agriculture, forestry and fishing sector (CBS 2014b: table 56). In the rest of the district, the manufacturing sector has developed significantly since 1971, and represented 7% of employment in Rupandehi District, by 2011 (ibid.). However, there are no factories or large industries within Lumbini Cultural Municipality. Outside the restricted five by five miles area, factories have developed rapidly along the Bhairahawa-Lumbini-Taulihawa road (Giri 2007: table 1; Appendix 6). Ultimately, another main source of revenue for local communities has been remittances. The latest 2011 Population Census data indicated that nearly one third of households in Lumbini Cultural Municipality had at least one member working abroad and sending remittances. In certain villages with a strong Muslim majority, like Tenuhawa, the figure raised to nearly 50% of households.

As discussed in the previous chapter (Section 2.3.2), one of the objectives of the site development was to play a pivotal role in regional economic and social development. However, the design team also recognised some negative impacts that the development of the project area could have on local communities including the loss of agricultural and grazing land, due to the land acquisition within the one by three miles Project Area. The regulations in the buffer and restricted zones also limited the development of other sectors, notably industries and

factories which are now large employers in Rupandehi District. Other negative impacts foreseen by the KTU (1972: 6, 12; KTU 1976: 7) team were:

1) The loss of control over access to water resources for irrigation;
2) The destruction of community buildings in the Sacred Garden (including a health post, a school, etc.);
3) Relocation of villages outside the one by three miles LMP Project Area which would have negative economic and social impacts on the communities that lived there.

For the first two negative impacts related to the local agricultural production and industrial sector development, the design did not provide mitigation measures, considering instead that such measures were beyond the project's boundaries and ought to be integrated in regional and national development plans (KTU 1978: 8). For the other negative impacts, the team recommended certain actions to at least partially mitigate the repercussions on local communities. Therefore, one of the objectives of this section is to analyse the development of the Project Area, comparing these recommendations with their implementation. Moreover, it discusses unplanned or unexpected positive and negative impacts that the Project Area development has had at the local level.

3.3.2. Land acquisition, infrastructure development and local communities

Early implementation of the LMP required the relocation of seven villages (Parsa, Parsa tola, Harnampur, Harwatola, Madnagar, Kirtipur, Lumbini Bazaar) out of the one by three miles Project Area, representing at least 1,050 inhabitants and over 137 hectares of cultivated land (KTU 1977: 6). Within the Sacred Garden, the school and a dispensary were also removed and planned to be relocated within the New Lumbini Village. Land acquisitions particularly have been an important source of conflict between the national implementing agencies and local communities, especially in cases of forced relocations, but also due to what was perceived to be insufficient levels of compensation for land and houses. Interviews conducted at later stages of the LMP implementation, in the 1990s and the 2000s, have indicated continued tension and resentment regarding the land acquisition process among certain households and population groups living in the surrounding villages (Molesworth and Müller-Böker 2005; Pandey 2007).

In the early 1980s, the compensation rate was fixed at 1,000 Nepali Rupees (NPR) per *bigha* (around 0.7 hectare) of land. Additional compensations were given when a house was on the land acquired, although the amount is unclear and various figures have been given by different stakeholders (Molesworth and Müller-Böker 2005). While there have been attempts at

estimating whether this was an adequate rate considering the land value at the time in Lumbini (Molesworth 1994), the lack of data has made it impossible to close the debate over whether or not compensations were equal to the actual land value. The interviews however have shed light on the land acquisition process in the late 1970s and 1980s and some of the issues that have arisen from it. Based on Molesworth and Müller-Böker's interviews in the 1990s:

"*the process of "relocation" was conducted in a heavy-handed and "top-down" manner. People reported that they were first asked to leave and given false promises regarding future provision of jobs and services (such as water and electricity) in new locations. Subsequently, however, they report that they were threatened and forced out from their lands and natal homes. Informants described how electricity supplies were cut, after which families were physically removed and their homes demolished before them*." (Molesworth and Müller-Böker 2005: 194).

This is not unique to Lumbini and similar processes have been for instance reported at Chitwan National Park in the early 1970s (McLean 1999). With the limited power of village and district representatives and committees under the Panchayat system, there were no opportunities for local concerns and complaints to be heard within the administrative system (Berry et al. 1974: 213). In Chitwan, some households and communities reportedly resisted the land acquisition process, presenting their cases to court or entering in direct conflict with soldiers during the resettlement phase, only few of them won and the large majority was forced out of the protected area. In Lumbini, interviews conducted in the late 1990s suggested that "i*t was not until after the introduction of democracy in 1990 that those displaced by the master plan development felt able to protest, after which the LDT gave assurance that they would not face further displacement*" (Molesworth and Müller-Böker 2005: 194-5).

Molesworth and Müller-Böker's interviews along with interviews conducted as part of the local Lumbini Radio station's programme called '*Hamro Lumbini'*, which translates to 'Our Lumbini', also discussed the aftermath and consequences for the removed communities and families (Molesworth and Müller-Böker 2005; Pandey 2007). These interviews have tended to indicate that the higher classes, wealthier landowners, affected by the project were able to purchase sufficient land outside the LMP Project Area to retain a sufficient income. By contrast, the poorer families either moved elsewhere with other family members or became landless and had to find low-skilled jobs, often daily work basis, elsewhere for their subsistence (Molesworth and Müller-Böker 2005: 195). While there is no data available, it is also likely that the scale of the land acquisition initiated a rapid increase in the land value immediately around the site as the demand increased due to a large number of relocated households looking for land. With the

sudden land value increase, residents who had lost their land or house may not have been able to afford an equivalent plot outside the LMP Project Area. Moreover, affected households were often not used to manage such large monetary savings, their wealth being in their landownership. In the case of Chitwan National Park, it has been reported that many families mismanaged the money that they received, most commonly overspending on special community and family events, like weddings or festivals, or on unnecessary expenses, like new vehicles (Joshi 2013: 4). As a result, a large share of the compensations given were used in these short-term expenditures rather than using savings to ensure their long-term livelihoods after the displacement.

There were no specific mitigation measures proposed in the LMP for the impact on local livelihood. The reports only made recommendations to align the site development with regional development plans and to consider compensating the loss of cultivated land by investing in technological improvements in the agricultural sector. By contrast, the KTU team had specifically recommended the construction of infrastructure and facilities that would benefit local communities and the provision of replacements for community buildings that were to be removed from the Sacred Garden, including a school and a medical dispensary. Therefore, a school and a health clinic along with additional social facilities, like the post office, police station and banks for both visitors and residents, were all meant to be developed in the New Lumbini Village which was also meant to get energy and water facilities. As of the last review in 2013, there was still no fund available, through donors or annual budget, for the construction of these components, including the school. Organisational factors may partly explain the slow implementation of these components that would have benefited local communities including utility work and water management infrastructure. In a multi-donor context, these types of infrastructure have often not been on donors' priorities and thus the lack of funding available for these components have delayed their implementation. As discussed previously, it has also more widely impacted on the implementation of the project as there were limited allocated funds for the groundwork required prior to the construction of the above ground infrastructure and facilities.

While the new facilities were not provided, especially in the early years of the project implementation, additional pressure was also put on the existing infrastructure, especially water supplies, housing and land due to the resettlement of refugees from Burma and later India in the 1970s and 1980s (Molesworth and Müller-Böker 2005). Additional plots of land were requisitioned by the Government for them to settle to the east of the archaeological site in Mahilwar. Social tensions rose between the different communities over the use of the limited

residential and agricultural areas, facilities and infrastructure, including electricity, water supplies and wells (Molesworth and Müller-Böker 2005). Competition over employment opportunities was also an important cause of tension between refugee communities and local residents, as labour jobs within the LMP Project Area, including the digging of the Central Canal, sponsored by the UN Food and Agriculture Organisation as a food for work programme, were given to refugees (Molesworth and Müller-Böker 2005: 197).

In many cases, non-governmental organisations have tried to respond to unmet needs, especially in infrastructure in the villages outside the LMP. One of the main organisations working locally is the International Buddhist Society (IBS), founded in 1993 by Bhikku Maitri, and based in Mahilwar (east of the LMP Project Area) (Mallik 2005: 49). Another active Community-Based Organisation (CBO) linked to the monastic community is the Lumbini Social Service Foundation (LSSF), founded by Ven Metteya. Both IBS and LSSF have been particularly focusing on education, health, water and other household facilities. IBS has notably developed projects in partnership with the International Non-Governmental Organisation (INGO) Himalayan Exchange to facilitate access to water sources, and to health services in the areas and villages directly affected by the LMP, including the opening of a health clinic in Mahilwar in 1996 (Mallik 2005: 47). The LSSF has been active in surrounding villages, opening three schools, including an all-girl school in the village of Mahilwar, and contributing to the management of the Crane Sanctuary.

3.3.3. Communities, site management and control of resources

While the LMP buffer zone and restricted areas were never implemented, a broader Lumbini Protected Zone was created in 2009, covering an area of 828 square kilometres within which carbon-emitting industries have been legally banned (UNESCO, 2013: 154). In the wider protected area, the enforcement of the regulations has been a challenge, but there are still no carbon-emitting industries located within a five-mile radius from the site. Many residents and some staff involved in the early years of the project mentioned in interviews that promises were made by site managers regarding employment opportunities in the Project Area to compensate for the negative impacts of land acquisitions and restrictions within the protected zones (Molesworth and Müller-Böker 2005: 197-198). Although some individuals have found employment as gardeners, security guards and other low-skilled jobs with the LDT or the monasteries, or as labour with construction companies working within the Project Area, in many residents' perspectives, these promises have not materialised (Pandey 2007: 17-8).

Another issue that has arisen from the implementation of the LMP relates to the use and management of natural resources. The 1978 LMP focused solely on water resources, but the implementation phases have indicated that resource management and access have caused broader issues beside access to water for irrigation and been a source of tensions with the LDT (Molesworth and Müller-Böker 2005: 203). The LMP Project Area had been a source of key natural resources for local communities, including wood, tall grass and mud collected for fuel, construction and craft material among other uses, and a grazing space for cattle, goats and other livestock. As part of the LMP, these areas have been reforested, and a variety of faunal and floral species introduced or reintroduced, to create the appropriate setting to encase the birthplace of Lord Buddha, with a quiet, clean and harmonious atmosphere in the immediate surrounding of the sacred archaeological site. To manage and preserve the forested areas, the LDT has prohibited access to livestock and uncontrolled use of natural resources. Local communities have tended to be seen as a threat and a management challenge for the maintenance of these forested areas (Figure 3.6).

From the local communities' perspective, the LMP has restricted their access to essential local natural resources within the Project Area which they used to collect freely prior to its implementation (Molesworth and Müller-Böker 2005: 202). Moreover, species such as wild boars and blue bull antelopes have created tensions with farmers living around the LMP Project Area because wild animals have regularly made their way into the surrounding fields and caused damage to crop and cultivated lands (ibid.: 205; Suwal and Bhuju 2006: 92). The most affected areas have been the former VDCs of Tenuhawa, Ekala, Madhubani and Lumbini Adarsha (Aryal 2007: 7). In 2007, local residents estimated that 5% of the total rice production was damaged by blue bulls in areas within one kilometre of the LMP boundary (ibid.: 8). Needs and resentments have led to the violation of the regulations in the LMP Project Area, including local residents getting involved in illegal activities such as "*fishing and fish-trapping by damming rain water drains, poaching endangered animals such as blue bulls and pythons and the illegal trading of endangered bird species*" (UNESCO 2013: 162). Local residents have also exploited the natural resources inside the LMP Project Area, logging and cutting trees for firewood, collecting mud and tall grass and used the site for animal grazing (Figure 3.6), dumping of waste and soil from excavations taking "*what they can while they are able to access it […] in an un-regulated and often non-sustaining manner*" (Molesworth and Müller-Böker 2005: 203). This situation led by the early 2000s to increasing pressure and loss of both faunal and floral species, with only 38% of planted trees surviving and a drop in the population of blue bulls from 200 in 1995 to only 50 in 2005 (Molesworth and Müller-Böker 2005: 204; UNESCO 2013: 148).

Figure 3.6 : Cattle grazing within the protected area. An example of competing uses of the natural resources between site managers and the focus on environmental conservation and local communities' traditional practices and uses of the resources in the LMP for their livelihood.
(Photo: Author, January 2017)

The response to both issues has been the construction of a brick wall around the Project Area, to keep the wildlife inside and control access to the site from outside (Nishimura et al. 2019: 127). While the wall has made movement in and out of the site more difficult, it has not succeeded in solving many issues related to the control of natural resources within the site (Watson and Rai 2019: 167). A more participatory approach has been advocated by researchers and environment experts (Poudel 2013: 1082; Aryal 2007; UNESCO 2013) but so far, beyond awareness-raising campaigns led by Lumbini Crane Conservation Centre, UNDP's *Tourism for Poverty Alleviation Programme* (TRPAP) and IUCN, local communities remain excluded from the management of this area (Suwal and Bhuju 2006: 90-2).

Another consequence of the LMP implementation relates to the use of the Sacred Garden as a ritual and religious site for local communities. As previously mentioned in Section 2.3.3, the local use of the site for religious and ritual practices predates the archaeological rediscovery (Führer 1972: 28). The Sacred Garden is still used today for worship by local Hindu communities, although there are limited records and information on the local ritual practices and how they have changed over the last century. By removing villages and acquiring the land in the immediate surroundings of the archaeological site, and with increasing number of visitors from

various religious traditions, it is likely that the LMP has had a significant impact on the local use of the religious/ritual space. Moreover, activities linked to the LMP have disturbed practices at times and changed the configuration of the ritual space. For instance, there is evidence of tensions with local communities related to the removal of the 1930s temple and the *Pipal* tree at its centre, which was considered sacred locally, at the start of the Government of Nepal and Japanese Buddhist Federation's excavations in 1992 (Lal 1999: 373-4). However, the evidence is currently limited to sparse references in different sources without any overview or analysis having been conducted to better understand the nature of the local intangible traditions in Lumbini, their continuity and changes over time and the impact of the LMP on community participation in local religious practices and rituals at the site.

There are thus various levels of dynamics and power struggles at the local level over the development, use and management of the LMP Project Area, with past controversies still very much present, while old and new objects of disagreement continue to maintain tensions between site managers and local communities. There is a third actor that is also critical in understanding the site development and its social and economic impact. The Buddhist monastic community which has developed within the Project Area has also contributed to the project's social and economic impact and has formed its own power relations and interactions with both site managers and local communities.

3.3.4. The local role of the permanent monastic community

The LMP has dedicated an entire zone within the Project Area to the development of an international monastic community. While at other Buddhist sites, monasteries organise few joint events, in Lumbini the LMP has favoured the formation of a monastic community which often comes together to organise religious events, including a monthly joint Full Moon Prayer in the Sacred Garden, and social programmes, but also to defend its interest with site managers and other stakeholders. The monastic community has grown in size and become an important actor in the local social and economic context.

With a growing monastic community, the Monastic Zone has become one of the largest local employers, with local staff hired for construction work, building maintenance, gardening, cleaning, security, cooking, but also as managers and caretakers of the properties. There is no record collected by the LDT on the number of resident monks and nuns in the monasteries nor on the number of staff. International consultants have provided some estimated figures in 2012-2013, based on field surveys conducted in 2012, of 38 full time employees, although it is unclear from the report how this number was measured (ETG 2013: table 20). The monastic community

also purchases food supplies and other commodities locally and therefore contributes to local producers' income and injects foreign currency into the local economy. There is currently no data to evaluate what this contribution may represent and data on resident monastic community, but also on the number of guests remain insufficient to make an estimate. Part of the monasteries' spending does not benefit Lumbini producers as supplies and food are also purchased from the larger towns, Bhairahawa and Butwal, but also from India. The location of the monasteries within the LMP restricts to a certain extent their economic and social contribution, as the monasteries do not pay taxes nor any additional charges but only an annual rent to the LDT and are physically isolated from the surrounding villages.

Some of the monasteries have guest houses opened to accommodate pilgrims from their home countries. While the LMP designed infrastructure for an estimated 450 pilgrims staying overnight within the Monastic Zone (KTU 1978: 15), in 2013, 349 rooms were recorded inside the Monastic Zone for a total of 1,450 beds (ETG 2013: 53). The data from LDT in 2018 suggested that the number had increased to 476 rooms, with 1,853 beds (LDT 2018b), which is significantly over the LMP estimates. The monasteries' guest houses have generated tensions with the local hotel owners outside the LMP Project Area (In 2013). For the latter, the monasteries' guest houses have represented unfair competition, due to their favourable location within the LMP Project Area and their limited running costs which have enabled them to provide very cheap accommodation (ibid.). Some monasteries' guest houses have not solely accommodated pilgrims but also backpackers on a low budget who have been one of the main markets targeted by many of the locally-owned businesses (Castleman 1999; IFC 2012: 19). Tensions between certain local groups and residents, the monastic community and LDT escalated in the late 1990s and reached a climax when a Japanese monk, Venerable Unataka Navatame, was murdered at the construction site of the Peace Pagoda (Castleman 1999). Overall while the monastic community has been an important local economic actor and contributor to the local economy, it has also raised concerns locally within the local business community.

Beyond their role in the local economy, most monasteries have organised or participated in a social programme, which has ranged from occasional food donation events, often associated to a religious festival, to educational activities or large-scale health programmes, like the eye-check programme organised annually by the Royal Thai monastery, with the support of other monasteries and local NGO and INGOs (Figure 3.7). Among the monasteries that have been most active, at different times, are the Chinese monastery, the Royal Thai monastery (Figure 3.7a-b), the Gautami Bhikkuni Vihar, the Dharmodaya Sabha (which is located near the Sacred Garden),

Figure 3.7 : Views of the Royal Thai monastery, including:
Figure 3.7a (above): View of the Royal Thai monastery temple (Photos: Author, December 2016)
Figure 3.7b (below): Boards in the Royal Thai monastery about its social and health programmes (Photo: Author, December 2016)

the World Linh Son Congregation and the Bodhi Institute, which was established in the Monastic Zone by the Lumbini Social Service Foundation in 2013 (LeVine and Gellner 2005: 215; Molesworth and Müller-Böker 2005: 201; Linh Son 2017; LSSF 2019). There is currently no systematic record of participants to these programmes, and therefore it is difficult to identify who has benefited from these programmes and evaluate their impact on local communities. One study focused on the Royal Thai monastery activities and community participation conducted a household survey in the local villages around Lumbini and found that 51.5% of their respondents had benefited at least once from a service or benefit provided by the monastery (Boonmeerit 2017: 336, 339). No further detail is provided as to the nature of the service/benefit or its impact on the respondents and their household.

3.3.5. Conclusion

Overall, there is evidence that the LMP has generated some economic benefits in the Municipality. Direct benefits include employment opportunities within the LMP Project Area, notably in the Monastic Zone but also the additional income generated locally by visitor spending along with government spending and international donations. The latter spending and donations have also represented additional income for various local industries, businesses and producers including the tourism, construction and transportation industries, but also indirectly for agriculture and farming. Social programmes directly or indirectly linked to the monastic zone have provided new opportunities for local households in education, water access and health. The main expected economic impact from the site development, however, was related to the increase in pilgrimage and tourism activities at the site, bringing in foreign currency and income to the local area. This impact is the focus of the last section of this chapter which reviews the development of pilgrimage and tourism in Lumbini since the conception of the LMP.

The review of the documentation and evidence related to the LMP implementation suggests that the social and economic objectives formulated in the conception and preparation phases have often not been translated in the implementation period. It is partly due to the lack of integration of the LMP within regional and local development plans but also to the implementation process with many of the mitigation measures recommended in the LMP final design to remedy some of the negative impacts of the site development for immediate communities remaining incomplete. The current management, moreover, provides no processes and structures to coordinate effectively the development of infrastructure in Lumbini with other development projects and with local stakeholders within the Municipality and the GLA. The situation currently limits the integration of other stakeholders and actors in the site management and LMP implementation.

The implementation of the LMP seems therefore to have created a separation between the Project Area and its surroundings, as the site management has not promoted and encouraged the development of links between the different areas of the LMP and the local communities. This division was initiated at the start of the project, with the removal of the villages from the LMP Project Area. Since then, limited efforts have been undertaken to bring the communities 'back in', in contrast with what has been done at natural heritage sites, like Chitwan National Park (Spiteri and Nepal 2008; Joshi 2013). This separation has impacted local access to natural resources, religious activities within the Sacred Garden, thus creating tensions with site managers, but also limited the positive impacts that the infrastructure development and the monastic communities' social programmes have had on local residents and surrounding communities. Ultimately, the lack of cooperation has made responses to additional unforeseen and unplanned social and economic repercussions challenging. The impact of wildlife on local farms, illegal use of natural resources within the LMP or tensions between monasteries and the local hotel owners are all unexpected consequences for which no long-term solutions have been found.

3.4. The evolution and characteristics of pilgrimage and tourism in Lumbini

3.4.1. Visitor numbers in Lumbini

At the time of the initial conception of the LMP, estimated visitor numbers were of just over 800 foreign visitors, excluding Indians, and 5,000 with the latter (Okada 1970; Alkjaer 1968: 21; Pollaco 1968: Appendix A, 1). There was little data provided in the later preparation phases of Lumbini, the KTU team only refering to 100 visitors daily in the peak season and several thousands annually (KTU 1976: 14). Foreign visitor numbers (excluding Indians) began to be recorded by the site manager in 1994 and have provided from that point onwards detailed information regarding number, seasonality and nationality trends in Lumbini (Figure 3.8). In recent years, estimates of Nepali and Indian visitor numbers have complemented that data (Figure 3.9).

The early figures suggested that the increase in visitor numbers had not met the predicted forecast made by the KTU team in the mid/late 1970s. The peak at 25,400 foreign visitors per annum in 1996 is indeed much lower than the expected 44,700 foreign visitors by 1980 and 89,700 by 1985 (KTU 1977: 12). After 1996, visitor numbers appear to have been impacted by the Maoist Insurrection and political unrest in the Tarai region (Lawoti and Pahari 2009; Gellner 2002; Crisis Group 2007), dropping to only 9,000 foreign visitors recorded in 2002. The LDT tourism data indicates that the total number of visitors in Lumbini has been increasing signifi-

Figure 3.8 : Foreign visitor numbers (excluding Indian) in Lumbini between 1994 and 2017 (Source: LDT)

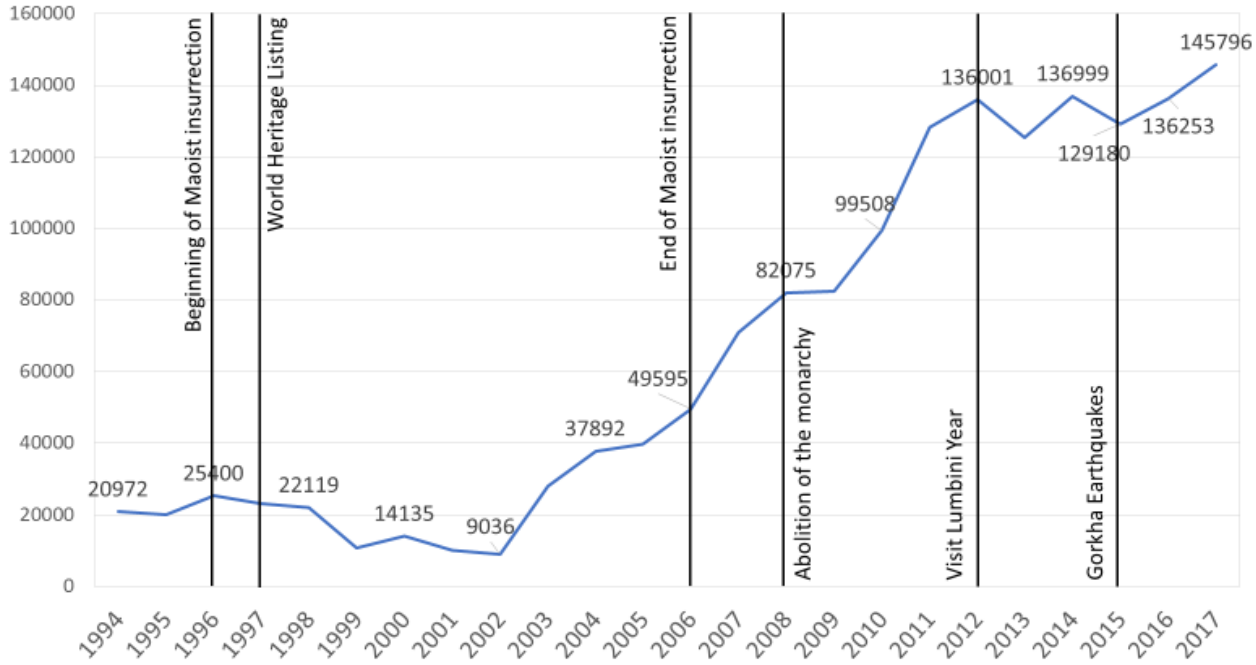
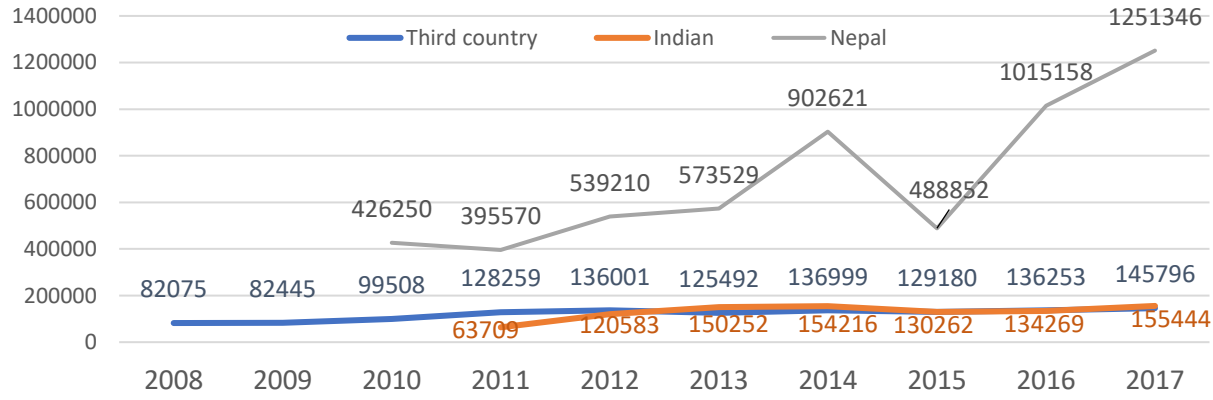


Figure 3.9 : Domestic, Indian and third country visitor numbers in Lumbini between 2008 and 2017 (Source: LDT)



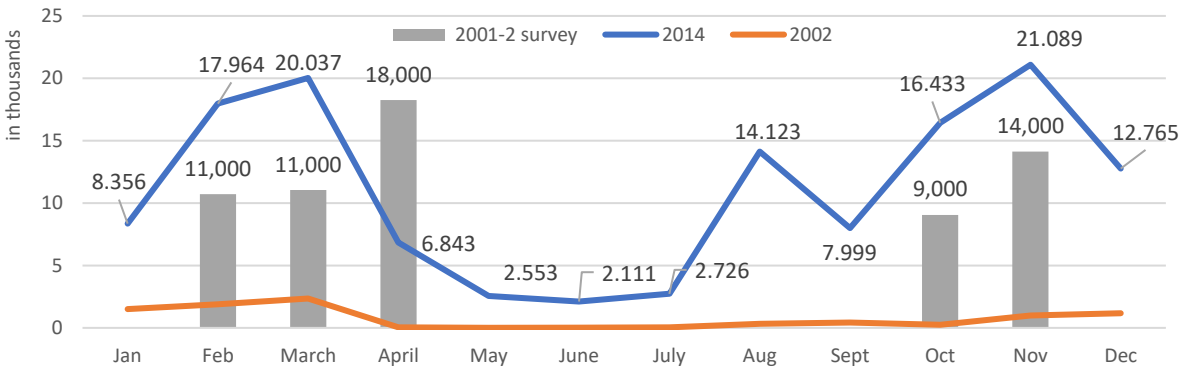
cantly in the last 15 years to reach an estimated 1.5 million in 2017 (MCTCA 2018: 86). Foreign visitor numbers (excluding Indian visitors), calculated based on ticket sales to the Sacred Garden, have increased from just over 9,000 in 2002 to over 145,000 foreign visitors in 2017 (MCTCA 2018: 80). Indian visitors, recorded separately, are the most represented foreign nationality, followed by Sri Lankan, Thai and Chinese visitors (MCTCA 2017). The fastest increase, however, seems to concern domestic tourism which has been annually estimated by

the LDT since 2010 and has more than doubled since to reach a figure of 1.2 million in 2017 (MCTCA 2018; Figure 3.9). Based on a growth scenario prepared in 2013 (Government of Nepal 2014: table 8), the numbers are predicted to increase to 3.4 million by 2025. However, the severe drop in visitor numbers in 2015, due to the combined effects of the 2015 devastating Gorkha Earthquake in Nepal and the several month-long blockades at the Indian border after the ratification of the new national Constitution in September 2015 (Snellinger 2016; Nepal Economic Forum 2016), has indicated that future trends could be strongly affected by recurring political instabilities in the Tarai and environmental disasters.

On an annual basis, visitor trends in Lumbini have also been marked by strong seasonal variations usually related to the local climate, with the low season coinciding with the Monsoon (Figure 3.10), but also to the religious calendar, including two large festivals which are *Buddha Jayanti* (April/May) and the *Chaitra Mela* (March/April), the local festival dedicated to Rupa Devi or the Buddha's mother, Maya Devi. In 2002, a survey of visitor activity conducted over a six-months period, in 2001-2002, highlighted the high fluctuations in daily visitor numbers, especially during these two festivals. Numbers during the *Chaitra Mela* reached a peak of 5,000 visitors on a single day (Coningham et al. 2010: 5). With the rapid increase in visitor numbers since 2002, this figure can be expected to have increased accordingly.

Considering the current trends in visitor numbers, the visitor numbers have been forecasted to increase to 3.4 million visitors by 2025 from just over 1.5 million at present (Government of Nepal 2014: table 8; MCTCA 2018). The construction of the international airport in Bhairahawa, to be completed by the end of 2019, is expected to have a significant impact on visitor numbers

Figure 3.10 : Monthly arrivals of foreign tourists in Lumbini in 2002 and 2014 (excluding Indian visitors)*, compared to the estimated numbers recorded between October 2001 and April 2002**
(incomplete data for December and February 2002)



*Source: LDT visitor data
the 2002 figures are published in Giri (2014)
The 2014 figures are published in Minsitry of Culture, Tourism and Civil Aviation (2015)

**Source: Coningham, Schmidt and Strickland (2010)

which in turn is expected to increase the economic impact of pilgrimage and tourism in Lumbini. In order to assess these social and economic impacts, recent reports and studies have therefore focused on defining the nature and characteristics of tourism and pilgrimage in Lumbini at present, including visitor practices, the size of the tourism sector and identifying existing leakages related to the sector's supply chains or to current visitor practices.

3.4.2. Characteristics of visitor activities in Lumbini

There have been several recent studies that have focused on defining the pilgrimage and tourism market in Lumbini. The International Finance Corporation (IFC)/World Bank Group sent a team, in 2012, who conducted interviews with various local and regional stakeholders (IFC 2012), the UNESCO/JFIT project *Strengthening the Conservation and Management of Lumbini Phase 1* conducted a short visitor survey in January 2013 (Coningham and Acharya 2013) and the Government of Nepal (2014) with support from the ADB South Asian Tourism Infrastructure Development Project (SATIDP) conducted other studies, including a *Tourism Promotion Plan for Lumbini and Adjoining Areas* (2015-2024), which builds on a Tourism Cluster Analysis (TRC 2013; ETG 2013). A few researchers, including Giri (2013) and Nyaupane (2009, et al. 2015) also conducted studies on the characteristics of the tourism and pilgrimage demand in Lumbini which can be used to consider certain impacts of visitor activities on local development.

The UNESCO/JFIT mission conducted a visitor survey and participant observation in January 2013 to collect information on visitor behaviour in, and perceptions of, the Sacred Garden and to compare results with those of the survey of visitors carried out in 2001 and 2002 (Coningham and Acharya 2013: 50-60). A total of 293 groups were surveyed in the Sacred Garden over a one-month period. Despite the small size of the sample, it has been the largest dataset available for Lumbini providing insights into current characteristics of visitor activities at the site which affect the economic and social impact of tourism and pilgrimage. 73% of the groups surveyed spent less than 30 minutes within the Sacred Garden and 66% did not stay overnight (ibid.: 51). Beyond the Sacred Garden, the Monastic Zone was the only place that attracted over half of the respondents. Therefore, despite the large-scale developments in and around the ancient sacred site, visitors tended to stay a very short time in the World Heritage property and in the local area, without making use of some of the other tourism and pilgrimage offers within the LMP Project Area or in its surroundings. The visitor surveys conducted by Giri (2013: 16-7) between 2012 and 2013 with 201 visitors provided similar results, with a majority of respondents only staying for one day (ibid.: 80). They primarily visited the Sacred Garden and key monasteries

within the Monastic Zone, including the Lotus Stupa (German Monastery), the Chinese, Korean and Thai monasteries (ibid.: table 73-4).

The studies conducted or supported by WBG/IFC and ADB between 2012 and 2014 are mainly rapid assessments, based on stakeholder interviews and short site visits, with field surveys being conducted over a few days or one-week period (IFC 2012; TRC 2013; ETG 2013; Government of Nepal 2014). Interviews were conducted in Lumbini but also in the wider region, including Bhairahawa, Butwal and in Kapilbastu District, which form part of the tourism cluster around Lumbini. The studies focused on estimating the economic contribution of tourism and pilgrimage in Lumbini on the region, through criteria including share of visitors staying overnight, hotel occupancy rate, visitor spending for different market segments. The direct output of tourism for the GLA and Palpa cluster, estimated at 26.9 million USD, was evaluated by dividing visitors into market segments, domestic, Indian and third country (TRC 2013: table 12). A small-scale visitor survey and stakeholder interviews of 50 respondents was then used to identify trends within these segment groups (Bhandari 2011), notably their length of stay in Lumbini and visitor spending, broken down into categories: accommodation, meals, travel and local transport, attraction and activities, entertainment and cultural events and handicraft and souvenirs (see Appendix 7 for the complete breakdown and estimates). The direct output or total visitor expenditure was then inferred based on the size of the segment groups and their estimated spending. Expected benefits from the visitor number increase was estimated to a direct output at the lowest of 26.9 million and highest 50 million by 2020 (TRC 2013: 32; Government of Nepal 2014: 23). However, the evidence that has supported these conclusions is limited, the estimates being primarily based on the tourism stakeholder interviews and a visitor survey conducted in 2011 with 50 respondents, thus offering limited quantitative evidence to support these figures (Bhandari 2011).

Moreover, data collected by the UNESCO/JFIT mission *Strengthening the Conservation and Management of Lumbini Phase 2* in 2016 in Tilaurakot-Kapilavastu, in Kapilbastu District, has suggested that the estimated visitor spending figures in the former studies may be an overestimation of visitor expenditure in the region. Based on a sample of 224 groups surveyed at Tilaurakot-Kapilavastu, the average spending of overnight visitors was evaluated by the UNESCO/JFIT mission at 29 USD per person, with daily expenditure by market segments between 18 and 37 USD (Table 3.3). This sample also has its limitations, including that visitor numbers in Tilaurakot-Kapilavastu are still marginal and not representative of most visitors coming to Lumbini. The site also tends to appeal to specific markets of visitors who tend to stay longer in the region (Coningham, et al. 2014: 74). There were also low numbers of Indian visitors

in the sample probably due to the existence of another site on the Indian side of the border, Piprahawa, also claiming to be ancient Kapilavastu (Tuladhar 2002). Among third country visitors, a large majority of individuals coming to Tilaurakot-Kapilavastu visited as part of a pilgrimage package tour and often stayed in the monasteries inside the LMP Project Area where there was no or limited accommodation fees (usually based on voluntary donations) (Coningham et al. 2016: 96-7). All these factors would certainly have an impact on Tilaurakot-Kapilavastu visitor expenditure compared to mainstream visitors in Lumbini. However, the figures were strikingly low in comparison with the figures given in the tourism cluster reports. While the data collected in Tilaurakot-Kapilavastu cannot effectively be generalised to the overall tourism and pilgrimage market in Lumbini, the study undertaken by the UNESCO/JFIT has started to provide spending patterns for additional market segments, notably based on purpose of visits or package vs independent groups (Table 3.4-3.5), for which there is no data available for the region.

The lack of data on tourism and pilgrimage activities has thus been one of the main issues limiting the current understanding of tourism and pilgrimage demands and the direct contribution on the local economy of different tourism and pilgrimage market segments. The existing data is not statistically sound and thus fails to successfully inform an evaluation of the social and economic impact of tourism and pilgrimage in Lumbini. Similarly, the existing information on tourism businesses and their supply chain has provided limited evidence and information on the indirect impacts and the current condition and limits of the local supply chain to retain tourism and pilgrimage expenditure within the region.

Table 3.3 : Estimated average total visitor spending by type of travellers in Tilaurakot-Kapilavastu (based on Coningham et al. 2016)

	Independent	Package
Sample (groups)	285	183
Average total spending per person (NPR)	3,579	1,535
Average total spending per person (USD based on 1USD=110NPR)	33	14

Table 3.4 : Estimated average total visitor spending per day by purpose of visit in Tilaurakot-Kapilavastu (based on Coningham et al. 2016)

	Religion	Heritage	Education	Other
Sample (number of groups)	323	76	27	62
Average total spending per person (NPR)	2,874	2,211	1,147	3,022
Average total spending per person (based on 1USD=110NPR)	26	20	10	27

Table 3.5 : Estimated average total spending for overnight visitors in Tilaurakot-Kapilavastu (based on Coningham et al. 2016) compared with results from the Tourism Cluster Analysis conducted in 2012-3 (based on ETG 2013: table 4)

	Total	Domestic	Indian	Third country
Sample (number of groups)	224	88	12	124
Average total spending per person (in NPR)	3,174	2,094	1,993	4,054
Average total spending per person (in USD*)	29	19	18	37
Estimated spending for Lumbini visitors in USD* (ETG 2013: table 4)	-	16	33	64

* conversion rates are based on the rates at the time of the survey; in 2016, 1USD=110NPR; in 2013, the ETG report used a conversion rate of 1USD = 85NPR

3.4.3. The tourism sector in Lumbini

As noted above, on the supply side, there have been very few studies or reports that have collected information and data on the tourism sector in Lumbini. Molesworth and Müller-Böker (2005) interviewed local shop owners which provided an insight into their activities at the time, including the challenges related to the trade and existing leakages, and the dynamics with the LDT in the early 2000s. In addition, the UNDP worked between 2001 and 2006 in Lumbini as part of its *Tourism for Rural Poverty Alleviation Programme* (TRPAP). The end of project reports (Dhakal et al. 2007), along with interviews with individuals involved in the project, provide further information regarding local initiatives to develop the tourism offer around Lumbini but also some of the opportunities and challenges faced by local communities to participate and enter the tourism and pilgrimage sectors. More recent reports and research provide figures on the tourism sector in Lumbini since the 2010s. Giri (2013) collected data from business associations, unions and other sources, including figures related to the size of the tourism sector in Lumbini and the wider region in 2013. At the time, the sector was still fairly small in Lumbini, with 28 hotels and guest houses, two travel agencies and 135 rickshaw drivers registered. The data collected, however, did not include shops and restaurants. Ultimately, the extensive interviews conducted with tourism and heritage stakeholders, the reports and studies supported by IFC and ADB between 2012 and 2013 have provided the most detailed picture of the current tourism offer, issues with the tourism supply chain and leakages which have limited direct and indirect impacts of tourism and pilgrimage activities in Lumbini.

All these studies and reports indicate that the increase in visitor numbers has been paralleled by a rapid growth of the tourism sector in Lumbini, with an increasing number of hotels and guest houses, shops and restaurants and other related employment, such as taxi or rickshaw drivers and tour guides. The growth has been supported by initiatives like UNDP TRPAP but also, more recently ADB's *South Asian Tourism Infrastructure Development Program* (SATIDP). This

support included professional training, notably tour guide training, but also craft-making and business management training and the development of village tours (Figure 3.11). UNDP TRPAP project set up handicraft production centres for traditional woven baskets with Tharu women and sculptures and figurines in various materials (clay, plaster and certain stone) with local potters, in the 2000s. However, there is no existing monitoring procedures for the growth of tourism businesses in Lumbini and therefore no available record of the growth rate in recent years. The increase in businesses is currently unregulated (Figure 3.12-3.13) and has not been integrated in local planning policies under the former VDCs and policies and regulations remain at present unclear under the Lumbini Cultural Municipality.

Figure 3.11 : View of a pond and cultivated land in Mahilwar. The village tour board was installed by LDT and funded by ADB.
(Photo: Author, January 2017)

Beyond the growing size of the local tourism sector, reports and studies indicate that there have been challenges linked to the loss of revenues related to backward linkages with local production and services. For instance, most souvenir shops only sell goods and products manufactured in either Kathmandu or India (IFC 2012: 35; Figure 3.14). While the UNDP TRPAP project set up handicraft production centres, the shops stopped selling local products because, in their experience, the latter did not sell well as they were more expensive with a finish that was not equal to manufactured products from India (ibid.). In addition, although locally owned guest houses tended to buy their products locally, interviews done with larger hotels as part of

Figure 3.12 : View of the New Lumbini Bazaar, near the Eastern Gate where most of the hotels and guest houses are located
(Photo: Author, January 2014)

Figure 3.13 : View of the houses further along the main road in Mahilwar, with a mixed of traditional construction material, including mud, timber and thatch and fired bricks.
(Photo: Author, January 2017)

Figure 3.14 : Souvenir stalls in Lumbini Cultural Zone, including:
Figure 3.14a : General view of the shops and stalls, at the entrance/exit of the bus park
Figure 3.14b : Close-up view of one of the shops, with commonly found items sold in Lumbini. Most of them are manufactured in Kathmandu, India and China
(Photos: Author, December 2016)

the IFC Tourism Cluster Analysis, indicated that they tended to purchase vegetables, meat, eggs and other manufactured food products either from Bhairahawa, other towns in the region or India: "*lack of quality and reliable supply are the main constraints. Year-round production of green vegetables, fruit, eggs and meat is lacking in the area. There are limited distribution systems for local food and produce in Lumbini*" (TRC 2013). There have therefore been significant leakages limiting the economic benefits of tourism for local communities.

There have been on-going projects and initiatives that are trying to address some of these issues, although few in Lumbini itself at present. A Special Economic Zone was created in 2016 in Bhairahawa offering tax reduction but also other advantages for industries and new commerce to move in the district capital. Other sites have initiated their own handicraft stall projects. In Tilaurakot-Kapilavastu, a joint district and forestry office project supported a Tharu women's group to open a handicraft stall at the site and to build connections with shops in key locations, including Bhairahawa Airport. During the funding period, the project was successful in enabling Tharu women to raise extra income and empower them within their households (Yadav 2016). Other planned projects, which have been part of ADB's 2013 Lumbini Tourism Promotional Plan have included "*development and promotion of home-stay village, agro-tourism village, organic farming village, craft village, eco-tourism village etc. Efforts will also be made to support poor, marginalized groups and women with tourism infrastructure support grant, improved access to soft loans, access to free of cost skill training opportunities, and access to market information to help starting and running micro, small and medium-scale tourism enterprises*" (Government of Nepal 2014: 26-7).

Based on their interviews with stakeholders, the TRC report for IFC/WB provided estimates on the local retention of tourism benefits in the Lumbini region (See Appendix 7). The report covered an area defined as "*Lumbini sub-cluster*" which included Lumbini Cultural Municipality itself but also Bhairahawa (TRC 2013: 11). The estimates were based on the visitors spending figures presented previously, and the proportion of local retention was estimated per spending category (accommodation, transportation, etc.) and was then combined to obtain the overall proportion. Their estimate was fairly low, with the district only retaining between 12% and 18.6% of the total package cost for overnight domestic, Indian and third country visitors coming by plane from Bhairahawa. Visitors coming by bus, especially those staying overnight, were the ones which had a higher proportion of their expenditures retained within the local economy, with figures ranging between 19.7% and 67.1% for the different market segments identified.

The method used for estimating retention per spending category was not clearly defined in the reports and mainly based on qualitative information (TRC 2013: 7). These consultant reports also provided an estimate of the contribution of tourism to employment in the GLA. It was estimated that the sector contributed directly 5,161 jobs in the region (ETG 2013: table 20). The estimate was done at the GLA level and based on stakeholder interviews which were used to estimate average workforce per tourism-related business while local union figures were used to estimate the number of people involved in tourism transportation (taxi and rickshaw drivers). Currently the lack of administrative data available on tourism and related industries limit the possibilities to measure the direct and indirect economic contribution of the industry to the local and regional economy. The only evidence available at present are results of stakeholder interviews, partial lists of businesses from district or national registration offices, inventories of hotels (recording number of hotels, category and bed capacity) and LDT information on the businesses renting space within the LMP Project Area.

3.4.4. Conclusion on tourism and pilgrimage development in Lumbini

The information and data presented in this section have provided the foundations to support recent large-scale investment on the transportation infrastructure, including the upgrade of the Bhairahawa Airport and the widening of the main road axis Bhairahawa-Lumbini-Tilaurakot (ADB 2014). However, the evidence is currently limited primarily to a few small visitor surveys and qualitative information collected through interviews with local stakeholders. Moreover, there is no detailed review of long-term trends and impacts of tourism development in the reports and studies available. At present, the existing literature provides an overview of the current tourism and pilgrimage context in Lumbini, with increasing visitor numbers and growth of the tourism sector over the last two decades. It also indicates important leakages arising from both visitor practices, including short stays in Lumbini, and from the sector's limited backward links with other local economic sectors and productions, including agriculture, retail and wholesale and handicraft production. While there have been attempts based on this evidence to evaluate the economic contribution of tourism and pilgrimage in Lumbini, the lack of long-term and quantitative data limits the quality and reliability of the estimates provided. As a result, the return of the investments currently made to develop tourism and pilgrimage in Lumbini is uncertain and there is insufficient evidence to accurately evaluate or estimate the economic and social impacts that can be expected for communities living in Lumbini and in the GLA. Overall, the analysis of the current tourism and pilgrimage literature on Lumbini suggests that there is a need to better understand the long-term trends within the sector but also significant

evidence gaps on the current economic and social contributions of the sector in Lumbini and the wider region.

3.5. Conclusion

This chapter focused on the second objective of this thesis and provided a review and evaluation of the implementation of the LMP and its impacts, based on existing data and information. The implementation of the Plan was affected by external political and economic factors, including the general political and economic instabilities throughout the period, with rapid inflation in the 1980s and 1990s, which have caused delays and rapid increases in the cost of the project. However, certain organisational and structural factors have also negatively impacted on the implementation of the project. The lack of resources for the fundraising campaign and later to complete the implementation of the plan is an important factor. Another is the lack of a clear, transparent and accountable management structure, as well as the lack of continuity in the policies followed by the LDT which has been affected by regular changes in decision-making positions linked to the political volatility and instability in Nepal during the period. The recent IMF aims to address these structural and organisational issues by providing the management structure and decision-making processes that are currently lacking for the World Heritage Site. The approval of the IMF by the Nepal Government would provide the site with a clear strategy, with defined aims and objectives beyond the completion of the physical components of the LMP, and managerial frameworks that strengthen the position of the site managers but also the links with other institutional and international partners.

Based on the evidence currently available, the review and evaluation of the impact of the site development has indicated both positive but also negative impacts for local communities. There is some evidence that the project has generated some economic benefits at the local level including providing direct employment opportunities within the LMP Project Area and the tourism industry, generating additional income for certain households, increasing the local economic production, with indirect impacts on various sectors including agricultural, construction and transportation sectors. The communities residing outside the restricted five by five miles area, have benefited economically from additional indirect impacts from the growth of industries and factories attracted by the improved road infrastructure and proximity to an active market for construction material and other supplies. However, current pilgrimage and tourism activities in Lumbini are affected by significant leakages which limit the economic and social impact of the site development on local communities. For communities residing in Lumbini, there have also been negative social and economic impacts, related to early land

acquisition but also the management and control of natural, cultural and religious resources within the LMP Project Area. The slow implementation of infrastructure and facilities designed to benefit local communities and mitigate negative impacts of the site development on local communities has also contributed to limiting positive impacts for local communities and raised controversies in a context of rapid population increase in the area putting pressure on the limited and outdated infrastructure and facilities.

The lack of coordination with local authorities and communities has had an impact on the understanding of, and evidence used to, monitor and evaluate the social and economic impact of the LMP. There are currently significant gaps in the evidence and data available on the site's social and economic impact on local communities but also on the links between tourism, pilgrimage, local heritage and local communities. This includes direct impacts that are still based on limited data but also the broader economic and social links with local productions, social structures and cultures and opportunities for further involvement with tourism both directly but also indirectly through the supply chain. As a result, it is difficult for international stakeholders and site managers to provide effective responses to existing issues such as the resentment of local businesses about the pilgrim guest houses in the Monastic Zone. There is also local resentment against the LDT for the plan's failure to fulfil the promises made in the early years of its implementation regarding employment opportunities and economic and social benefits for local populations. The current lack of holistic understanding of the impact of heritage interventions but also tourism and pilgrimage activities have also affected the development of future plans and policies for the site development.

Within the current transitional phase with the near completion of the LMP, bridging this gap is critical in order to inform planning and future developments at the site and in the GLA. The following chapter thus addresses these issues by conducting a data gap analysis to collate the data available and accessible from the various existing sources and assess to what extent this evidence enables to monitor and evaluate the social and economic impacts of the LMP. Ultimately, the chapter suggests gap-closing strategies and methodologies to collect additional data to inform policies and interventions.

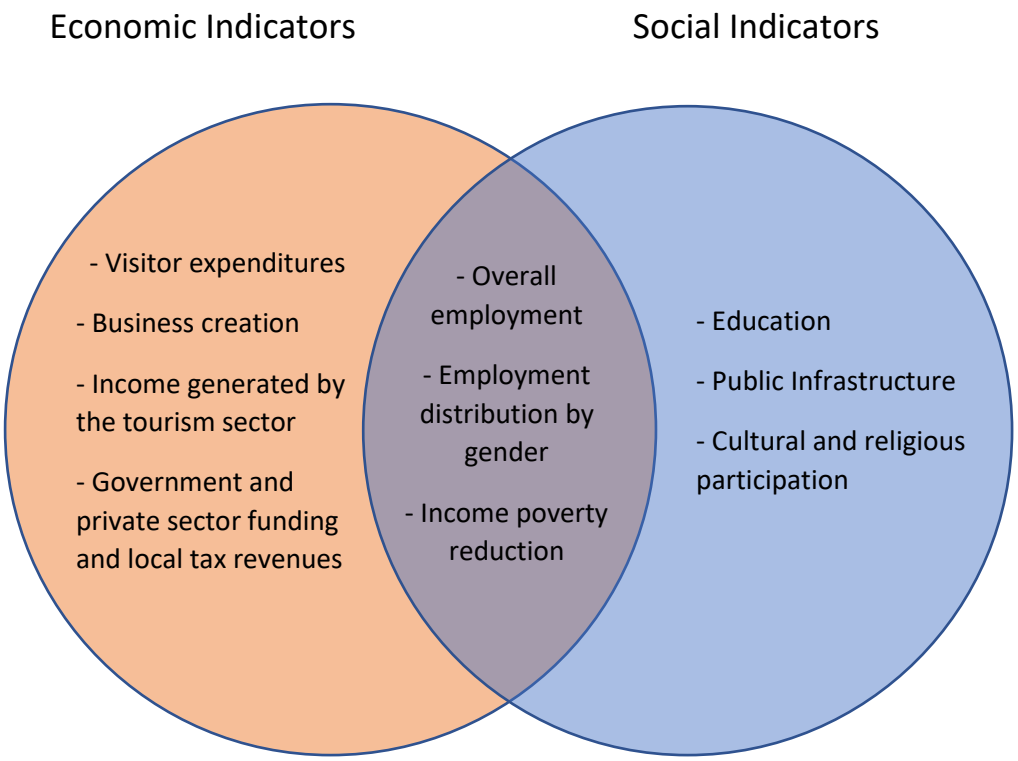
CHAPTER 4: EVALUATING AND REVIEWING THE EVIDENCE FOR THE SOCIAL AND ECONOMIC IMPACT OF THE LUMBINI MASTER PLAN

4.1. Introduction

The previous chapters have critically reviewed the conception, preparation and implementation of the LMP, focusing especially on the definition of economic and social objectives and their translation into the infrastructure planning and implementation phases. Building on this initial analysis, this chapter meets the third objective of this thesis of developing an analytical framework and methodology to evaluate the current evidence, identify the main data gaps which would need to be filled to fully capture the social and economic impacts of the LMP on Lumbini communities and propose a gap closing strategy. The methodological approach is based on a data gap analysis, used to assess the evidence and ascertain what economic and social impacts can or cannot be inferred and evaluated based on the existing available and accessible data. The data gap analysis provides the foundation to develop a gap-closing strategy, using primary data and rapid assessment methods, to inform social and economic impact evaluation for current planning and future developments at the site.

This chapter first presents the analytical framework and methodological approach that has been developed as part of this research. Figure 4.1 provides a general outline of the analytical framework developed for Lumbini which consists of 10 economic and social indicators, each with related sub-indicators. This framework has been informed by a comparative analysis of various approaches developed by different international, national and sector-specific organisations to evaluate the impact of culture, heritage and/or cultural tourism on social and economic development. One of the main challenges to apply existing frameworks to this case study has been related to the availability and accessibility of administrative and public data in Nepal, especially for the earlier phases of the LMP implementation. Decades of political instability, successions of administrations and limited resources have hindered data collection, but also the development of digitised systems and mechanisms to facilitate public access to the existing data (Dennison and Rana 2017: 11-14). The level of disaggregation of available and accessible data can also be limited, especially at the local municipal and village level (NPC 2017: 21). Considering the limitations of the administrative database at national level, the framework has been closely informed by the review of the conception, preparation and implementation documents discussed in the previous chapters, notably the development objectives formulated during the conception and preparation phases.

Figure 4.1 : Basic analytical framework to evaluate the social and economic impact of Lumbini



The methodological approach used is a data gap analysis which is an approach to data evaluation popularised recently as part of the development of the Sustainable Development Goals' (SDG) indicators and reporting process (NPC 2017; Leadership Council of the Sustainable Development Solutions Network 2015). The approach is based on comparing an inventory of the data required to measure indicators with an inventory of the data currently available, based on its accessibility and reliability, in order to identify the gaps and propose a strategy to meet them (Aalders and Stanik 2016; Jennings 2000; Ariño et al. 2016; AHMS 2015). A broad literature review on heritage and development has been used to identify the data needed to evaluate each indicator of the analytical framework and to identify the main sources of information commonly available and used for this purpose.

The following section of this chapter applies the data gap analysis to Lumbini, based on the analytical framework and set of indicators, to review and assess the evidence for the social and economy impact of the LMP on local communities. The data collection for Lumbini has used both secondary data available online along with scoping visits to Lumbini and Kathmandu to identify the range of sources and data available and/or accessible for the period of study from

the conception of the LMP until the present. Based on the result of this initial stage of research, it has been possible to identify existing data gaps and indicators for which there is no or limited available, accessible and/or reliable data. This assessment of the current evidence and understanding of the social and economic impact of Lumbini's past and on-going development informed initial steps to start bridging the data gap, based on rapid assessment methods. The data gap-closing strategy and primary data collection methodology developed to bridge the gaps are reviewed in the last section.

4.2. Defining the analytical framework and methodological approach

There has been an increasing interest among different stakeholders since the 1980s, including heritage professionals and researchers, policymakers, and the international community, in understanding the wider social and economic values and impacts of heritage (Labadi 2008; Getty Conservation Institute 1998). This increased attention has led to the development of new theories and discourses on the strong links between culture, heritage, tourism and sustainable development (Nurse 2006; Cousin 2008; Pereira-Roders and Von Oers 2011; ICOMOS 2011; Baycan and Girard 2011; UCLG 2004). Heritage-related projects have been defined as having a wide range of impacts, including on economic and employment opportunities in various sectors, education, civic pride, identity building and sense of place, capacity-building, community building, health and wellbeing, etc., at different levels (local, regional, national) (CHCfE 2015; Dumcke and Gnedovsky 2013; El Beyrouthi and Tessler 2013; UNESCO and OVPM 2012). However, the understanding of the nature of the social and economic impacts of heritage interventions and policies and their measurement remain limited (OECD 2007a, 2007b, 2009; Rizzo and Mignosa 2013). The challenges for on-going research are partly methodological: social impact evaluations, for instance, are still in most cases based on qualitative information (Dumcke and Gnedovsky 2013) while economic impact assessments have often been criticised for inflating the benefits, notably by failing to consider negative impacts or costs of heritage projects (Getty Conservation Institute 1998; WBG 2015: 5-7). Linked to these issues, the lack of data to support quantitative assessments is also a major challenge and restrains methodological options and/or the quality of assessments (UNESCO Institute of Statistics 2009b; Deloumeaux 2013; Nypan 2015).

This section firstly focuses on a number of selected frameworks and sets of indicators defined by different international, national and sector-specific organisations to evaluate the social and economic impact of culture, heritage and/or heritage tourism. This comparative approach highlights the more commonly used indicators but also the diversity of indicators. Current limitations/challenges related to these frameworks and their indicators, including the

availability, accessibility and reliability of the existing data are also discussed. The second section focuses more specifically on the issues related to data availability, accessibility and reliability and provides a broader review of the heritage research literature on the nature of the evidence, including where the data comes from, in what format and the challenges associated to different types of datasets and information available. Considering the range of impacts associated with heritage, the data collected by heritage practitioners is generally not sufficient to grasp the full extent of both positive and negative impacts. The use of other data systems and sources, including censuses, administrative data or surveys, is necessary but also comes with a number of challenges linked to access and to the use and interpretation of data that was not collected for the specific purpose of impact evaluation and/or for the heritage sector. The heritage sector has begun to provide responses to some of these challenges, through international, intra-national and national frameworks for culture and heritage, however at site level, the guidelines remain limited.

4.2.1. The development of the analytical framework

Table 4.1 provides a comparative summary of selected frameworks and indicators developed to evaluate the social and economic impacts of heritage, culture and/or heritage tourism. The selected studies provide a broad range of frameworks developed by different key actors in the heritage field, including international organisations, national organisations, researchers and consultancy firms. There is also a diversity in the focus of the studies: some apply a more 'macro' perspective, aiming to analyse the broad contribution of culture and heritage as a whole to economic and social development; others have a more 'micro' perspective, focused on evaluating a specific project, an economic sector's performance or a specific country's policy. The former includes UNESCO's *Culture for Development Indicators* (2014), but also earlier attempts by UNESCO Institute of Statistics (2009a) *UNESCO Framework for Cultural Statistics (FCS)*, the OECD (2007) experts' workshop on *International Measurement of the Economic and Social Importance of Culture* and the CHCfe Consortium's (2015) *Cultural Heritage Counts for Europe* report, based on a literature review conducted within Europe.

Frameworks and studies with a more case-specific focus include the Oxford Economics study on the economic impact of heritage tourism in the UK first conducted in 2013 and updated in 2016 (El Beyrouthi and Tesler 2013; Logan 2016), the *Cultural Indicators for New Zealand* (2009), on the social and economic impact of the New Zealand cultural sector, and Rebanks Consulting's (2009) report on the economic impact of World Heritage listing. There is also one case study that has been used in a South Asian context to evaluate historic cities regeneration projects in India and Pakistan. The latter is an adapted version of the Aga Khan Development Network's

Table 4.1 (1): Comparative analysis of social and economic impact evaluation frameworks and studies					
Source	**Focus of the study**	**Type of Study / Research Methods**	**Economic Indicators**	**Social Indicators**	**Other Indicators**
UNESCO Culture for Development Indicators (CDIS) (2014)	Culture as driver and enabler of development	- Build on UNESCO's previous publications on Culture Indicators - Literature review - Collaborative process involving international experts, national public administrations, national statistics and research institutes and civil society organizations - Tested at country level	- Contribution to Gross Domestic Product (GDP) - Employment - Household Expenditure	- Education (inclusive education, multilingual education, arts education, professional training) - Social (going-out participation, identity building participation, inter-personal and intercultural trust, self-determination) - Gender (gender equality output, perception of gender equality)	- Governance (standard-setting framework, policy and institutional framework, infrastructure, civil society in governance) - Communication (freedom of expression, internet use, diversity of media content) - Heritage Sustainability
CHCfe (2015) Cultural Heritage Counts for Europe	Tangible and immovable heritage	- Literature / case study review within the EU cultural network	- Return on Investment - Real Estate Market - Gross Added Value - Housing Stock Management - Regional Competitiveness - Regional Attractiveness - Labour Market - Place Branding	- Social inclusion - Social Cohesion - Community participation - Continuity of social life - Education, Knowledge, Skills - Creation of Identity - Sense of place	- Cultural indicators (architectural language, image and symbols creation, visual attractiveness, creativity and innovation) - Environmental indicators (Reducing urban sprawl, preserving embodied energy, lifecycle prolongation) - Cultural Landscape
UNESCO Institute of Statistics (2009a) The 2009 UNESCO Framework for Cultural Statistics (FCS)	Cultural Sector (Cultural and Natural Heritage, Performance and Celebration, Visual Arts and Crafts, Books and Press, Audio-visual and Interactive Media, etc.)	- National data but using international classification systems for their analysis (eg: ISIC, CPC, EBOPS and ISCO) - For social impact: Household and time use surveys	- Economic production of cultural sector and related domains - Employment in cultural sector and related domains - Cultural consumption	- Cultural Participation: employment, visits, attendance to formal / informal events, etc - Intangible Cultural Heritage: language, identity building practices (social participation, identity, cultural diversity, social cohesion, social appropriation)	n/a
OECD (2007) International Measurement of the Economic and Social Importance of Culture	Culture (heritage and creative industries)	- Experts' Workshop	- Sector's Output and Value Added - Employment Level - Government and Private Sector Funding - Level of exports / imports - Amount of domestic content in the output (household spending and consumption of cultural products)	n/a	n/a

Table 4.1. (2): Comparative analysis of social and economic impact evaluation frameworks and studies					
Source	**Focus of the study**	**Type of Study / Research Methods**	**Economic Indicators**	**Social Indicators**	**Other Indicators**
el-Beyrouthi and Tessler (2013) Economic Impact of Heritage Tourism in the UK (reviewed in Logan 2016)	Heritage Tourism	Analysis of UK Tourism Surveys Focus on the share of heritage tourism in the economic impact of tourism activities	- Contribution of heritage tourism to GDP (direct, indirect and induced); - Contribution of heritage tourism to employment (direct and indirect)	n/a	n/a
Ministry of Culture and Heritage (2009) Cultural Indicators for New Zealand	National Cultural Sector	Administrative data	- Income of the cultural industries - Valued-added contributed by the cultural industries - Creative industries' proportion of total industry by value-added - Cultural employment	- Engagement - Cultural Identity - Diversity - Social Cohesion	n/a
Rebanks (2009)	World Heritage Designation	Case study	- Business - Regeneration - Coordinating investment through strategy	- Civic Pride/Quality of life - Quality Infrastructure - Education Better/new services	- Media value - Preservation of heritage Unique Selling Point - New identity/ destination image - Culture and creativity - Cultural' glue' and new interpretation
Aga Khan Development Network (AKDN 2015; van der Tas and Bianca 2007)	AKTC historic cities programme monitoring and evaluation based on the AKDN's Quality of Life Assessment Indicators	Primary data collected through household surveys and qualitative study but also action-specific monitoring and evaluation	- Household Economic Wellbeing (including income, employment and entrepreneurship)	- Health and education - Social and cultural asset - Physical infrastructure	- Governance: representation and influence - Natural Environment

(AKDN) Quality of Life Assessment framework (AKDN 2013) and has been developed specifically to monitor and evaluate the AKF's development and conservation projects in historic cities, including Humayun's Tomb World Heritage Site, Nizamuddin Basti and Sunder Nursery areas (Delhi, India) (AKDN 2015, Aga Khan Trust for Culture 2014; van der Tas and Bianca 2007). The latter is different from the other case studies as it is project-based, with a specific lifespan, and based purely on primary data collected by the project team and/or participants, rather than administrative and secondary data.

4.2.1.1. Dimension 1: Economic impact indicators

The comparative approach has highlighted key agreed indicators of economic impact which have been used in the analytical framework. The most commonly used are gross added value of the sector (both direct and indirect contribution to GDP) and employment creation within the sector and related industries.

Cultural and/or tourist consumption is also a common indicator and measured through household or visitor spending. Results of these types of studies vary quite extensively, one of the main determinants being whether the studies have taken into account costs and leakages. The latter is the revenues raised by heritage interventions and tourism, through external investment and spending, which leak out of the local economy and are retained by other regions or other countries. For instance, the fees paid to contractors from outside the local area, the purchase of construction material elsewhere, or in the case of Lumbini, the fees paid to foreign, Indian or Kathmandu-based tour operators. In developing countries and at local level, leakages tend to be high and have been estimated at several destinations at over 50% of visitor spending (McCulloch, Winters and Cirera 2001: 248; Walpole and Goodwin 2000; Sandbrook 2010a, 2010b). They are, however, difficult to measure and have often been missed out or underestimated in economic impact evaluations (Walpole and Goodwin 2000: 570; Smith and Jenner 1992).

Many studies have tended to "*leave out the negative effects of cultural projects (traffic congestion, the loss of economic value due to regulation)"* (Getty Conservation Institute 1998: 33). The environmental costs, for example, can be significant and affect the sustainability of the project and the site development (Travis 1982: 258-9; Fyall and Garrod 1998; Zhong et al. 2011). Critics have also pointed out that the question of opportunity cost, i.e. alternative uses of the funding that could have generated higher multipliers and economic impact, is often disregarded in economic impact evaluations on the cultural sector. Moreover, one of the main challenges in conducting these impact evaluations is the availability and accessibility of reliable data. These

evaluations require sufficient data/evidence to trace correlations between an observed change and activities, outputs and outcomes of interventions. The lack of data to support quantitative assessments is a major challenge and restrains methodological options and/or the quality of assessments (UNESCO Institute of Statistics 2009b; Deloumeaux 2013; Nypan 2015).

The analytical framework incorporates agreed indicators, while also considering these known limitations, especially within the Nepali context where public and administrative data availability and accessibility at local level is limited. The framework separates core economic indicators of production and consumption from the employment indicators which have been considered as socio-economic indicators of differences and inequalities across the communities of Lumbini and will be discussed later. The economic indicators used for Lumbini are the following:

- Visitor expenditures
- Business creation
- Income generated by the tourism sector
- Government and private sector funding and local tax revenues

For each indicator, sub-indicators have been identified and are listed in Table 4.2. The sub-indicators have been defined based on common practices identified in the comparative analysis. For visitor expenditures, the visitor number figures are required along with visitor spending data collected through surveys of visiting groups. The number of tourism businesses in Lumbini but also the annual growth rate of the latter between 1978 and 2018 has been identified as the key data required to evaluate business creation. The proportion of non-local owners has also been considered an important sub-indicator, especially to identify leakages and the revenue that may not be retained in the local economy. The measurement of the income generated by the tourism sector is based on the sector's income, evaluated by individual business incomes but also expenditures. With this data a multiplier can be estimated to evaluate indirect impacts, taking into account business expenditures that were not made in Lumbini and are therefore not retained in the local economy. The approach used to evaluate these leakages is dependent on the nature of the evidence available and accessible. For the Government and private sector funding and tax revenues indicators, figures on the total investment in the LMP are essential, along with information to estimate the share that was not retained in the local economy (i.e. outside contractors' or consultants' fees, for example). Another sub-indicator incorporates the entrance fees and other site revenues, but also data on the local government's tax revenues from tourism and pilgrimage activities, including local taxes but also the portion of national

taxes that remains with the local government, would be key to understand direct and indirect revenues raised by the site. Ultimately, based on common concerns and issues mentioned in the documentation on the LMP conception, preparation and implementation phases, the loss of agricultural land was identified as a significant negative impact of the site development (see previous chapter, Section 3.3.2).

Table 4.2 : Analytical framework: economic indicators	
Indicators	Sub-Indicators
1.1. Visitor Expenditures	1.1.1. Visitor Numbers 1.1.2. Visitor Spending per person per group (including total and by type of expenses)
1.2. Business Creation	1.2.1. Current number of tourism businesses in Lumbini 1.2.2. Annual growth rate of tourism businesses between 1978 and 2018 1.2.3. Share of non-local business owners
1.3. Income generated by the tourism sector	1.3.1. Total tourism business income 1.3.2. Total tourism business expenditures 1.3.3. Multiplier (accounting for leakages)
1.4. Government and private sector funding and local tax revenues	1.4.1. Total investments in the LMP 1.4.2. Estimated share of total investment not spent in Lumbini 1.4.3. Tax revenues for the local government 1.4.4. Entrance fees and other site revenues
1.5. Negative economic effects (as per LMP)	1.5.1. Loss of agricultural land

4.2.1.2. Dimension 2: Social impact indicators

The approaches to social impact indicators are much more diverse among the cases used in the comparative analysis than the economic indicators. This reflects the current research context on social impacts, "*subject, mostly, to qualitative assessment, […] few studies contain attempts at developing a general methodology of quantitative assessment of the social value of heritage based on a consistent system of measurable indicators*" (Dumcke and Gnedovsky 2013: 139-40). Since this review, two main branches have developed in development studies to address the shortcomings of social impact methodologies which have been adapted for culture and heritage.

The first approach is based on the concepts of health and wellbeing and first developed in the early 2010s to integrate a wider range of social indicators for measuring development. They have been extensively discussed and reused in heritage studies since the mid-2010s (Dodd and Jones 2014; Fujiwara et al. 2014). However, the latest major international frameworks for culture and heritage have tended to align more closely with SDG indicators (UNESCO 2014). In the present context, there are limited bridges between these two emerging approaches, but sustainable development thinktanks and researchers are currently working on integrating wellbeing indicators and methodologies into the new SDG monitoring and evaluation frameworks (Sachs 2016, 2019: 6). Indeed, many indicators or dimensions tend to be present in slightly different forms in all or most of the approaches, including education and participation. Another component always present but often split across different dimensions or indicators, like health, attractiveness or communication, is the development of public services and infrastructure, including roads and transportation, but also health facilities, post-office, cultural centres, among other examples.

While indicators and sub-indicators for evaluating education and infrastructure development are fairly similar across the different studies, indicators and sub-indicators related to participation tend to be defined and structured very differently in the frameworks and studies used in the comparative analysis. They are often linked or interlinked with indicators of community identity and sense of place. There is no consistency among them regarding what the scope of each dimension/indicator is. For instance, elements of each can be found under the following indicators or sub-indicators: cultural participation, employment, social inclusion, social cohesion, community participation, continuity of social life, sense of place, cultural 'glue', civic pride, etc. These indicators and/or sub-indicators are indeed based on concepts that are difficult to define and often inter-linked which explain the variety of approaches developed in each framework. Cultural participation, for instance, has been defined as a continuum, influenced by "*the ways in which ethnically-marked differences in cultural tastes, values and behaviours inform not just artistic and media preferences but are embedded in the daily rhythms of different ways of life; and of the ways in which these connect with other relevant social characteristics – those of class and gender, for example*" (Bennett, 2001: 60, 102; see also Jackson 1998). This definition of the concept is very broad and difficult to translate statistically. Consequently, these indicators or sub-indicators are often evaluated based on qualitative information focusing on "*narrative arguments and interviews that capture evidence of feelings and the experience of residents and participants*" (CHCfE 2015: 169).

The social indicators used in the research analytical framework are derived from the definition given by the UNESCO Institute of Statistics (2009a: 44) of cultural participation which includes "*all elements of participation in cultural activity or practices, whether they are through formal employment or attendance at formal (i.e. performance in a theatre or subject to fees) or informal cultural events (community events, family events) not subjects to monetary transactions, or through cultural activities at home*". For the purpose of this analytical framework, the elements included within this definition were split between 1) socio-economic impacts, related to participation in the form of 'formal employment', discussed in the following page, and 2) formal or informal religious and cultural events taking place at the site, as indicator of the continuity and changes in the role of the site in the religious and cultural lives of communities in Lumbini Municipality.

Table 4.3 provides the detailed list of the three social indicators, education, public infrastructure and religious and cultural participation, and sub-indicators of the analytical framework. Within the context of Lumbini and Nepal where limited data is collected nationally and locally on the cultural sector, sub-indicators have been specifically related to actions that were part of the listed objectives of the LMP in its conception documents and which were integrated in the physical plan finalised in 1978. For instance, public buildings and infrastructure (Indicator 2.2) were planned as part of the LMP and the site development. Some of these were designed specifically to provide facilities within the non-residential LMP area, but others were related to regional transportation, and to the New Lumbini Village development, with wider users and social implications. For education (Indicator 2.1) in particular, a school was designed in the New Lumbini Village with the aim of replacing the school demolished in the Sacred Garden in the late 1970s as per the LMP's recommendations (see Section 3.3.2). The implementation of these components has therefore been used as indicators of social impacts of the site development. The activities of monasteries and the network of local CBOs and NGOs that they work with was considered as deriving from the site development and therefore counted as indirect impacts.

Cultural participation (Indicator 2.3) is usually measured based on population surveys with specific questions on the level of engagement in cultural activities of the total population and different sub-groups (UNESCO Institute of Statistics 2009c; Morrone 2006). However, in the context of Nepal and Lumbini, this type of data is not collected at national administrative level nor commonly collected by other stakeholders at heritage sites. Therefore, for the purpose of the framework, it was identified that the data required would at least include a current list of annual cultural and festival events in the LMP, and a list of key rituals that have continued to be performed in the Sacred Garden before the implementation of the LMP and known rituals that

have stopped since. The comparison provides an overview to determine changes in ritual practices since the plan's implementation, notably losses in ritual practices and intangible traditions. Considering that the Sacred Garden temple was one of the main *foci* of local ritual life for Hindu communities living in the surrounding villages, since before its archaeological rediscovery, the distance between the shrine and the nearest seven villages (i.e. based on the number of villages that were displaced) has been identified as a key factor affecting the way local communities and residents engage with the site and participate in religious and cultural activities. The three sub-indicators have also been informed by any additional available data from site managers or qualitative based on interviews with local residents from different population groups.

Table 4.3 : Analytical framework: social indicators	
Indicators	Sub-Indicators
2.1. Education	2.1.1. Construction of the school in the New Lumbini Village 2.1.2. Number of educational programmes run by site managers 2.1.3. Indirectly: number of schools opened by or with the support of monasteries
2.2. Public Infrastructure	2.2.1. Road development in Lumbini Municipality 2.2.2. Number of health post built in the LMP 2.2.3. Number of other public facilities built in the LMP 2.2.4. Public use of water reservoirs in LMP 2.2.5. Waste management 2.2.6. Indirectly: outputs of IBS and monasteries-run health and water access projects
2.3. Religious and cultural participation	2.3.1. List of annual cultural and festival events in the LMP 2.3.2. Continuity of local rituals and worship in the Sacred Garden (based on comparison of inventory of known practices prior to the LMP and practices afterwards and until present days) 2.3.3. Distance between nearest seven villages and Sacred Garden (using the Asokan Pillar as a reference point)

4.2.1.3. Dimension 3: Socio-economic impact indicators

Finally, the third dimension within the analytical framework includes indicators with both social and economic implications and integrates questions related to the equality of access and

opportunities across different population groups and communities and the empowerment of marginalised groups (Table 4.4). In the comparative analysis of previous studies and frameworks, these questions are covered within different indicators, including employment, gender, social inclusion and participation. As previous chapters have emphasized, a central aspect of the site development and source of tension with the site managers, but also among local communities themselves, is employment. Employment and poverty reduction are also the main arguments put forward to promote the development of tourism and pilgrimage in the GLA as a development that is "*pro-poor, pro-women, pro-environment and pro-community*" (Dhakal et al. 2007: 1). These questions of employment and poverty reduction are therefore fundamental and central to understanding who is involved and who benefits from the development of Lumbini and have formed the core socio-economic indicators for this analytical framework. The first indicator (Indicator 3.1) is the overall direct employment in the tourism and heritage sector in Lumbini, based on total number of people in the tourism and heritage workforce in Lumbini. The second indicator (Indicator 3.2) focuses on women's participation, as both business owners and employees, based on sub-indicators measuring the distribution by gender for owners and among the workforce. The third indicator (Indicator 3.3) focuses on income poverty reduction for marginalised caste and ethnic groups. Ultimately, the negative effect indicator (Indicator 3.4) is based on the shared view in contemporary conservation practices that recognises displacement as a cost for the local community (Dudley 2008: 17; Torri 2011; Holmes et al. 2017). The sub-indicators used are the number of households displaced and the compensation and mitigation policies put in place.

Table 4.4 : Analytical framework: Socio-economic indicators

Indicators	Sub-Indicators
3.1. Overall direct employment	3.1.1. Number of people employed in the tourism sector 3.1.2. Number of local residents employed in the LDT and the monasteries
3.2. Employment distribution by gender	3.2.1. Distribution of business owners by gender 3.2.2. Distribution of employees by gender
3.3. Income poverty reduction	3.3.1. Distribution of business owners by caste/ethnic groups 3.3.2. Distribution of employees by caste/ethnic groups
3.4. Negative effect (displacement)	3.4.1. Number of households displaced 3.4.2. Compensation and mitigation

The analytical framework incorporates commonly used indicators across different evaluation frameworks developed to evaluate the social and economic impacts of culture, heritage and tourism. However, it is restricted in its scope, especially for the social impact evaluation, to the limited information and data available from national administrations for the time period of 40 years covered in this thesis. While culture statistics have improved worldwide, the availability and accessibility of the data remains an important issue in many cases, notably in developing countries and for local level analysis. In the context of Lumbini development since 1978 and in the context of Nepal where "*database of development information is limited and available statistics are insufficiently disaggregated*" (NPC 2017: 21), the administrative data available and/or accessible is in many cases not sufficient to statistically demonstrate causal links between observed wider social and economic changes and the site development.

As part of the SDG reporting objectives, Nepal is currently developing its administrative database, analysis and information managements systems but also creating new platforms for facilitating access to this data (CBS 2017; NPC 2017). These developments will offer new possibilities to monitor and evaluate at the local level the broader impacts of future developments at or near the site. At present, however, the limited data available from national administrations and public organisations is insufficient to evaluate wider unplanned indirect impacts of the LMP, particularly social impacts. Therefore, the social impact evaluation and indicators can only focus primarily on documented impacts, based on the LMP implementation activities and outputs. Moreover, many of the sub-indicators only measure outputs, what has been implemented, rather than outcomes. Due to the limited evidence, the framework is thus limited to the presence or absence of infrastructure rather than indicators of how it has been used by local communities over time and how it has benefited them.

The analytical framework also does not include some indicators of negative impacts often associated with mass tourism: overcrowding, security and theft, traffic, environmental costs and pollution, etc. These indicators have not been included mainly due to the context of research and the specificities of tourism and pilgrimage in Lumbini. While visitor numbers have been increasing in Lumbini in recent years, the numbers remain limited and issues of overcrowding in the residential areas, traffic and/or security and theft, have not been mentioned in any previous research on the impact of tourism in Lumbini nor in any of the scoping interviews done with local residents in Lumbini. Within the current tourism context, these questions have therefore not been considered a primary focus of the impact evaluation at this stage of Lumbini development. However, with the increasing number of visitors and the completion of the international airport in Bhairahawa expected for 2019, these issues are more likely to affect the

Lumbini Cultural Municipality in the future and the potential impacts would need to be monitored and evaluated in the next phases of development of Lumbini and its wider region.

Ultimately, the impact of tourism and site development on the environment of the GLA is an issue that has arisen over the last decade. The environmental data for the initial stages of development of Lumbini is insufficient to monitor and review environmental pollution trends over this period, and therefore to link observed changes with the site development. However, a few studies started to look at environmental issues in the 2010s (IUCN 2013; UNESCO 2013; Meucci 2013). More recently, the new air quality observatory which opened in Lumbini in 2016 as part of the International Centre for Integrated Mountain Development's (ICIMOD) *Atmospheric Watch* programme has started to collect regular data on air pollution. This new data provides new evidence that will need to be incorporated in future monitoring and evaluation of on-going and future developments at the site and its wider region, particularly with the recent acceleration of infrastructure development in the GLA.

4.2.2. **The nature of the evidence and the data gap analysis approach**

This section introduces the methodological approach used for this research which follows a data gap analysis process. It also discusses the use of this approach in the current research context related to monitoring and evaluating the societal role and impact of heritage. While the lack of agreed theoretical and analytical frameworks has been an issue for economic and social impact evaluations, the availability, accessibility and reliability of the data has also been an important concern and a restraint for developing the current understanding of the social and economic impact of heritage. This section thus starts by introducing and discussing the data gap analysis approach, the different steps of the analysis, and its use for evaluating existing data and identifying the gaps that would need to be addressed in order to evaluate social and economic impacts. It then moves on to reviewing data sources for evaluating the social and economic impact of heritage and what are the issues/ challenges with the existing evidence.

A data gap analysis reviews the existing data from all sources available, evaluates their accessibility (complete, partial, not accessible) and reliability, in order to assess the evidence that can be used to analyse a specific question and measure indicators. There is no standard method to conduct a data gap analysis. However, all of them share a common approach aiming to detect what data is missing to monitor and evaluates activities, changes and/or impacts, for what reasons and suggest pathways to bridge the gaps (Aalders and Stanik 2016; Jennings 2000; Ariño et al. 2016; AHMS 2015; Government of Pakistan 2017). The objective of a data gap analysis is to improve the efficiency of an organisation and/or intervention, by identifying where

it is missing data and information to evaluate its actions, especially the possible inefficiencies which would need to be addressed (Scott et al. 1993; Ariño et al. 2016: 5; Stuart et al. 2015: 18-9).

Data gap analysis has been commonly used in the private sector and businesses but also in environmental conservation research to identify data that is missing, notably on the state of conservation of specific species and locations of species at risk, type of threats, which would need to be collected in order to inform conservation policies and actions and provide effective responses (Scott et al. 1993; Jennings 2000). More recently, the data gap analysis approach has also widely been used as part of the development of indicators to monitor and evaluate the implementation of the Sustainable Development Goals (SDGs). With a total of 242 indicators in the new global indicator framework for SDGs, the framework represents a significant data collection challenge for all member states to ensure that the data that they collect meet the new requirements and can effectively monitor and evaluate changes for the 17 SDGs and associated indicators (CODE 2018). Data gap analyses have therefore been widely used in the SDG context to identify the stretch between the data needed and the data currently collected by member states (Government of the People's Republic of Bangladesh Planning Commission 2015; Government of Pakistan 2017; ONS 2018). Perhaps because of the challenges related to data availability and accessibility in the heritage and cultural sectors, the approach has only rarely been used in the heritage sector (AHMS 2015). Where it has been used, in most cases it has been to inform heritage conservation, rather than to inform the development of impact monitoring and evaluation procedures.

A data gap analysis is a step-by-step process, starting with the definition of the scope of the analysis which is the question(s) it is trying to answer or the selected indicators. Within this scope, an 'ideal state' is then defined, based on the data that would need to be available and accessible in order to respond to the question(s) or evaluate indicators. In the case of this thesis, the 'ideal state' is defined by the 10 indicators and associated sub-indicators identified in the analytical framework. The second step is then to identify the range of data resources that are available and critically review the existing evidence to determine the gap between this 'ideal state' and the existing data. Data gaps can come from the unavailability of the data, in cases where the data does not exist and has never been collected. It can also come from the limited accessibility to the existing information and data when the data is not or only partially available publicly or not digitised. Unreliability of the existing data, which can be incomplete, biased or outdated also creates data gaps. A critical review of the data available therefore includes cataloguing it by sources and location, type of data, form and format, and fitness-for-use to

derive interpretations or conclusions on the indicators selected to monitor and evaluate change. The results of the identification and assessment of the data availability, accessibility and reliability, are then compared to the 'ideal state' and the data/information required to measure selected indicators to determine and pinpoint the data gaps.

In social and economic impact evaluations of cultural heritage, the most commonly used data sources include site managers' documentation, data from public administrations, but also surveys, rapid assessments or studies conducted by other actors such as researchers, CBOs/NGOs/INGOs or consultants (Deloumeaux 2013). Each source has its own advantages but also limitations when using them for monitoring and impact evaluation (WBG 2007: 7-10; Stuart et al. 2015: 12). Site managers' documentation includes visitor data (numbers, origin, etc.), data on events and programmes organised in the property, employment record, annual budget and income generated (ticket sales, events, shops, donations, etc). This data provides information on the activities within the heritage site from which some direct impacts of the heritage site activities can be inferred. The data, however, is limited to the boundaries of the property and the responsibilities of site managers and therefore does not monitor the wider impacts of activities related to a heritage site, including the additional income generated by tourists and outsiders visiting the site for local businesses (Bowitz and Ibenholt 2009: 3, 5). For social impacts, it is common practice among site managers to collect data on output (number of participants, etc.). The measurement of outcomes is a very recent focus and continues to present many challenges, especially for quantitative assessments (Taylor et al. 2015; Applejuice 2008). Another issue with this data has been linked to transparency and accessibility for the wider public and/or researchers (Bondi and Lapsley 2014; Baxter 2009: 96-9). While descriptive data, such as visitor numbers, are often widely available, employment records, budget, income, expenditure data among other information are often internal documentations and not accessible publicly.

Administrative and public data, generated by a wide range of government administrations and agencies, tend to cover larger samples or, for example in the case of national censuses, the entire target population, and a wide range of sectors and activities at different national, regional and local levels. This data includes population censuses but also sector-specific data, for instance on education, health or tourism industries, through "*vital registration offices, education authorities, health service providers, immigration authorities, government budgetary authorities, business registration and/or licensing authorities, tax authorities, government customs agencies, vehicle licensing and registration offices, and other such service providers*" (ADB 2010: 49). While most of this data is not collected for statistical purposes, but to inform

administrative and regulatory procedures, they represent a rich and often unique source of information for statistical analysis (Deloumeaux 2013). Their coverage and completeness tend to be high and can be aggregated at different administrative levels or by various population groups. The regularity of the data collection also enables us to analyse trends over time.

This data, however, tends to be less flexible, and its use for statistical analysis for the cultural sector or for a specific site can be affected by its coverage and its scope, including the targeted population. For instance, local level samples from national surveys can be too limited for a more in-depth local level analysis or discrepancies can exist between the coverage of administrative data and the population or indicators covered in the evaluation (ADB 2006, 2010; NPC 2017: 54-5; Deloumeaux 2013: 201). Other issues relate to the definitions of terms and how categories are divided but also how the data is presented and the level of disaggregation of the accessible information. Datasets are not always made accessible to the public, site managers or researchers and can only be provided in a limited, transformed format, like in-text references in reports or summmaries, for example. Moreover, aggregated data, from national censuses for instance, may not be available or accessible at the local level (village, municipality) but only at district, regional or national levels.

Completeness of the datasets and comparability can also be important issues "*due to discrepancy in the content of each [cultural or heritage] category, differences in definitions and a lack of homogeneity in years available for different data among and within countries*" (Deloumeaux 2013: 190). The latter questions are currently being addressed at national, regional and international levels, with organisations' proposing shared/commonly agreed definitions of the cultural sector and their associated data collection methods (CAB 2008; European Commission 2012; UNESCO 2014). Some countries have trialled Satellite Accounts to better trace production and consumption for sectors that cut across multiple sectors and industries, including tourism and culture (Government of Canada 2018; UN DESA 2010). The Satellite Accounts involve creating a framework to identify in the national accounts and balance of payments' data, available for more traditional industries, like transportation, construction or food and beverage, the contribution that can be associated with the cultural or tourism sectors (UN DESA and UNWTO 2008: 60-61). Satellite Accounts can also integrate non-monetary components (Hara 2015: 33). These recent developments have provided some responses to issues of discrepancies in national measurements and evaluations but have not addressed similar issues at site level.

Ultimately, other actors, such as consultants or researchers also conduct individual studies which often involve primary data collection. The latter can be commissioned or funded by site managers, but also by public or private organisations, including heritage institutions. These studies often provide a snapshot of what is happening at the site or within the heritage sector at a specific time. The data collected can be very detailed combining quantitative data and qualitative information to define impacts. However, the latter studies tend to have a limited scope, i.e. a project-based or around specific research questions and are often not repeated regularly (WBG 2007: 11). As a result, they do not often have the long-term perspective offered by site manager, public and administrative data. The accessibility to the data can also be limited to in-text reference in reports or published, written or oral summary of results, without access to original datasets for both the public, including other researchers, and site managers. The quality of reports can also vary between different research and projects potentially affecting the reliability of the data presented (RFA 2015).

The diversity of data sources required for evaluating the social and economic impact of heritage represents a challenge in terms of monitoring the existence or non-existence of data and assessing its reliability. The data gap analysis process not only can be used to identify the absence of data but also to evaluate the quality of the existing evidence and discusses the factors that impact data accessibility and reliability. Ultimately, this analysis informs gap-closing strategies to adapt existing data collection methods or collect new evidence to better understand the impacts of an intervention on the population studied.

4.2.3. **Conclusion**

This section has discussed the analytical framework, based on 10 indicators of social, economic and socio-cultural impacts of the Lumbini Master Plan and their associated sub-indicators (Figure 4.1). It also introduced the methodological approach used in this thesis, based on a data gap analysis process. The following section applies the data gap analysis to Lumbini, to evaluate the existing evidence on the social and economic impact of the site development on local communities, based on the analytical framework indicators. The outcome of the data gap analysis was used to critically review the current understanding of the social and economic impacts of Lumbini development, but also to identify indicators for which there is no or limited data and develop a methodology to start bridging these gaps, when possible, using rapid assessment methods.

4.3. Applying the analytical framework and data gap analysis in Lumbini

4.3.1. Overview of the data gap in Lumbini

The rationale behind the data gap analysis conducted as part of this thesis has been to assess what data already exist and could be used to evaluate the social and economic impacts of Lumbini development since the conception of the LMP. The analysis has also considered how the evidence has grown over the course of the project implementation and identified what data would need to be collected to fully understand the social and economic impacts of heritage-related interventions on local communities. The scope of the data gap analysis has been based on the analytical framework, the three dimensions and 10 related indicators identified to evaluate changes and the economic, socio-economic and social impacts of the site development.

In order to identify and assess the existing data for each indicator, several methods and sources have been used (see Appendix 8.1 for full list of sources consulted). A literature review was conducted using archives and mission reports from international organisations, national administrative documents, surveys and censuses, consultant reports and published research. To complement the literature review, a first scoping phase was conducted in February-March 2017 to identify the full range of available data and sources, including non-digitised data at the local level. During this initial phase of research, various offices were visited, including the LDT administrative and accountant office, municipal and ward offices but also district tourism boards (Ministry of Culture, Tourism and Civil Aviation) and cottage and small industry and commerce offices (Ministry of Industry). The data from all these sources has thus been evaluated based on its availability, accessibility and reliability. The data gap analysis has focused on 1) identifying categories of data that are not yet available but would be necessary to inform stakeholders' decisions and understanding of the social and economic impacts of their interventions, 2) identifying areas where the data is insufficient to provide an understanding of the social and economic impact of heritage and tourism activities in Lumbini, 3) assessing quality of available data and understanding the limits of the existing evidence.

The results of the data gap analysis have been reviewed and discussed for each indicator (see Appendix 8 for summary tables). Overall, they have highlighted a number of limitations and broad gaps in the existing data on the long-term social and economic impact of the LMP on local communities. While there has been more reliable data available and accessible for more recent phases, particularly since the late 2000s, many gaps are still not met by the current monitoring and evaluation procedures developed as part of on-going or planned developments.

4.3.2. Data gaps for economic indicators and sub-indicators

Appendix 8.2 presents the results of the data gap analysis for the economic indicators and sub-indicators of the analytical framework. The results have indicated that for nearly all indicators, the data is currently incomplete for the full time period of the LMP implementation. The sub-indicator on Government and private sector investment in the LMP Project Area and related projects (i.e. road and airport) has more available, accessible and reliable data, from LDT regular reports on their physical planning and construction programme and from funders, including ADB, UNDP and UNESCO, all summarised in the UNESCO/UNDP review of the LMP implementation in 2013. For some components, the contractor is also listed which provides more information on leakages and the share of these investments which is actually spent within the local area. Although the data is not complete, it suggests that contractors have nearly all come from outside the local area, either from foreign countries or Kathmandu with therefore a limited amount of the investment being retained within the local economy.

Some data exists and is accessible for sub-indicators on visitor numbers, number of businesses and tourism revenues, but is incomplete for the time period and/or only covers specific components. LDT visitor numbers cover the period from 1994 for third country visitors, but only the period after 2010 for Indian and Nepali visitors. Tourism business information is split across different district offices (including the Tourism Board for certain types of hotels and guest house, Cottage and Small Industry Office and the Commerce Office) and national bodies (including but not limited to the Nepal Tourism Board office in Kathmandu). These offices collect registration information including date of registration, name and type of business, owner(s), and, for hotels, capacity and ranking (standard, 1/2/3 stars). They have no information on activities of the business following their registration, and therefore no data on income generated by the business, employment or taxation which are collected by other offices (i.e. Inland Revenue Office, etc).

Moreover, the responsibilities of these offices have changed over time which has led to a situation where the same business can be recorded separately in different offices, creating duplicates while also a certain number of tourism businesses, including smaller ones and the ones within the LMP Project Area, are not registered at all. Local branches of tourism business associations probably have the most up-to-date and complete lists. Giri (2013) provides the lists of registered businesses in 2013 for hotels and guest houses, travel agencies and rickshaw drivers. As discussed previously in Section 3.4 on the evolution and characteristics of tourism and pilgrimage in Lumbini, consultant reports have provided figures regarding generated

income from the tourism sector but due to the lack of data available their estimates are based on very limited, primarily qualitative evidence from interviews and surveys from a very small sample of visitors.

There have been very limited available or accessible data for the other sub-indicators, including Visitor spending (1.1.2), Annual growth rate of tourism businesses between 1978 and 2018 (1.2.2), Tourism business income and expenditures (1.3.1. and 1.3.2.) and Tax revenues for the local government (1.4.2.). For visitor spending, it has been possible to confirm that there is currently no reliable data available on this indicator at present. For some of the other sub-indicators, it could not be ascertained whether the data for Lumbini is not available, with for instance the existing administrative data not digitised at the required level of disaggregation (VDCs and later Municipality or by sector), or whether the data exists but is not publicly accessible.

4.3.3. Data gaps for social indicators and sub-indicators

Appendix 8.3 presents the results of the review of the sources and the availability, accessibility and reliability of the existing data for each social indicators and sub-indicators. The most reliable data is related to the public infrastructure dimension and most indicators on education, as the implementation of the LMP has been well documented. The development of local transportation and road network has been well recorded with tarmac roads connecting the villages between them and with key regional centres, like Bhairahawa, Butwal and Kapilavastu Municipality, the Indian border and Kathmandu. By contrast, as discussed in detail in the previous chapter, the provisions made in the LMP for public infrastructure, including health posts, security posts, post offices, and other infrastructure that were planned for the New Lumbini Village have not been implemented. The school that was designed for this area has also not been built yet (as per date of submission). In terms of evaluating outcomes of infrastructure development, a recent survey was conducted by the Durham University's UNESCO Chair on the perception and use of the Lumbini Museum, with a sample of 89 local residents from surrounding villages (Coningham et al. 2018). While it has provided some evidence for local uses of the museum, the sample is too small to understand in more depth, the factors encouraging or limiting the local use and impact of the museum on different population groups and communities. Ultimately, the LDT, the monasteries and local organisations, including IBS and the Lumbini Social Service Foundation (LSSF) with strong links with the monastic community, have had social programmes which are partially recorded. Existing data include number of

schools opened, number of participants to educational and health programmes and number of water and other facilities built as part of their activities.

As expected, there is currently very limited data available on the participation of different local communities and population groups in religious and cultural activities in the LMP Project Area. The distance between the Sacred Garden and the closest seven villages before the LMP and at present is well documented and therefore has been used as a proxi indicator to evaluate the impact of the LMP on local engagement with the site. While early visitors to the site recorded local ritual practices observed during their visit of Lumbini, there is a large information gap on the local intangible practices related to the site since the mid-twentieth century and the later phases of the LMP implementation. The references have been few and, when available, they have tended to provide limited details on the local beliefs and rituals associated with the site beyond reporting their existence. For instance, the socio-economic survey report on Lumbini by Okada (1970b: 42-43), the UN Community Development Advisor, makes no mention of the goddess worship in the Sacred Garden in his section on the present role of the site.

Nevertheless, a non-exhaustive inventory of local practices could be undertaken using early visitors, consultants and researchers' accounts to identify traditional local practices. Recent records based on a 2010 visitor survey data and participant observation have also been used to identify practices that are still performed. Moreover, in 2014, the LDT compiled a list of annual festival and religious events that are celebrated in Lumbini. The latter are recorded based on the religion or traditions that they are affiliated with, and the key locations where they are performed. This list, however, does not include all public rituals or festivals organised separately by the monasteries. It also does not provide any information on the participants, including numbers and socio-demographic data.

4.3.4. Data gaps and socio-economic indicators and sub-indicators

Appendix 8.4 presents the results of the data gap analysis for the socio-economic indicators and sub-indicators. The analysis indicates that this dimension and its indicators are probably the least documented based on the current evidence available and accessible. The LDT does not publicly publish information regarding its workforce, it could not be confirmed whether early employment data has been digitised and is internally available. The administrative office provided an outline of the LDT workforce and their breakdown, based on gender, position and type of contract, as per the start of 2018. There is no available data on employment in the Monastic Zone, as it is beyond the LDT administration. Each monastery and contractors manage their own workforce internally, with no readily accessible data. The availability and

completeness of the latter data for each monastery also remains unknown. No data was available or accessible on tourism businesses ownership or employment patterns. There is also no existing household survey which could provide information regarding employment within local households. There is, therefore, currently no available or accessible data to evaluate what the tourism and heritage sector's direct contribution to local employment has been. Consultants have resorted to making estimates of employment, based on the number of hotels and guest houses and information gathered from interviews with local tourism stakeholders to estimate the average number of employees per business (Section 3.4.3). The lack of data on this dimension is in stark contrast with the stated objectives for the development of Lumbini and tourism to promote poverty alleviation and empowerment of marginalised groups.

In terms of overall employment and income within the Lumbini Cultural Municipality, there is limited information. While the national population censuses collect employment data, the latter is not disaggregated at the district or local level. There was no regular data collected on tourism employment at national level. A tourism employment survey was conducted in 2014 nationally but only included three hotels in Lumbini and no data is available at all on other types of businesses, including restaurants, shops, etc. The rickshaw drivers have a committee which has figures on number of rickshaw drivers in Lumbini and which has provided an estimate of the average daily income (Giri 2013: 104). The former VDCs used to prepare population profiles but only one of them could be located during the survey. The others were not with the Municipality and could not be found in the former VDC offices. Considering that the limited number of industries and factories within the Lumbini Municipality, the LDT and the tourism sector are important, if not the main, employers locally. Therefore, understanding what they represent in terms of local employment is central to understanding the economic and social dynamics within the Municipality. The data could also provide information regarding the participation in these industries among different population groups and communities.

4.4. The social and economic impacts of the Lumbini Master Plan: what is known?

4.4.1. Economic and socio-economic indicators

The existing data can be used to provide a long-term perspective on specific indicators or sub-indicators of the analytical framework. The data gap analysis, however, indicates that the available and accessible evidence is too limited to make a complete quantitative assessment of the long-term economic and social impact of the site development (see summary tables in Appendix 9.1). The evidence on which an economic impact evaluation can be based is the visitor number figures, the government and private sector investments in the implementation of the

LMP and site revenues, with also limited information on site managers' expenditures. Although the data is not complete, it suggests that the site has been generating increasing revenues from government funding through the annual budget but also from donations by foreign government and private donors, visitors and land and service charges paid by monastic organisations (Table 4.5). These revenues are not all spent locally, however, and there have been significant leakages related to both administrative costs, including salaries to non-resident staff, and infrastructure development. While the records are not sufficient to provide an estimate of the leakage rate, they suggest that for the construction of the LMP infrastructure and buildings, including most monasteries as well, contractors from outside the local area have been used, either from foreign countries or from Kathmandu. The main share retained within the local economy has been related to labour while, at the district level, factories within Rupandehi have increasingly been the source of key construction material, like brick and cement.

Table 4.5 : Site revenues and expenditures based on records from international organisations and LDT (in 1000s NPR)

Year	Before 1998*	2005	2006	2007	2008	2009	2014***	2015***	2018***
Government Grant	97,000	79,860	80,000	96,000	106,000	118,344	180,962	500,000	660,000
Aid from Indian Embassy		4,052	2,283						
							27,296	242,200	389,935
Internal Income	122,084	9,203	16,037	19,367	19,158	29,447	107,531	137,700	109,450
- *Sacred Garden Entrance fee***	*217*	*6,404*	*7,758*	*11,161*	*13,214*	*13,132*	*26,060*	*23,091*	*NA*
TOTAL INCOME	219,084	93,116	98,320	115,367	125,158	147,791	315,789	879,900	1,159,385
Administrative expenditures	4,800	24,240	27,045	31,011	33,305	43,584	-	-	-
Capital expenditure	211,863	9,599	66,931	67,916	69,350	101,080	-	-	-
TOTAL EXPENDITURES	216,663	33,839	93,976	98,927	102,654	144,664	-	-	-

* based on Gurung 1998;

** calculated based on LDT visitor records and entrance fees (excludes museum entrance fee)

*** based on data published in the LDT annual magazine, Lumbini Darpan 2015, 2018

All other data based on LDT 2010: 102

While the site development has generated new revenues at the local level, it has also caused a loss of land and private housing for local communities. Land acquisitions particularly have been an important source of conflict between the national implementing agencies and local communities, notably over the level of compensation, in the early stages of the implementation. The existing data only includes the number of households affected (Table 4.6) and the compensation rate of 1,000 NPR per *bigha* of land (around 0.7 hectare). The lack of data regarding land value in the 1970s has made it impossible to evaluate whether the compensation was equivalent to the actual land value at the time (Molesworth and Müller-Böker 2005).

Table 4.6 :Estimate of the number of people affected by resettlement, based on population data collected in the preparation phase and size of agricultural inside the Project Area for each village clusters (KTU 1976)

Village Clusters	Inhabitants	Double-cropping area	Double-cropping Area/inhabitant
Harnampur-Parsatola-Parsa	650	55.4ha	0.09ha
Harwatola	50	10.8ha	0.22ha
Madnagar	110	26.8ha	0.24ha
Kirtipur	240	43.3ha	0.18ha
Total	1,500	136.3ha	--

The thesis' scoping interviews conducted in the villages around Lumbini, in February and March 2017, have also suggested that the livelihood of households afterwards has been influenced by how they managed the compensation that was given. Several interviewees raised the point that most households were not used to manage such large monetary savings, their wealth being in their landownership. Without adequate support and guidance in household financial planning, many families therefore mismanaged the compensation that they received. Some for example overspent on special community and family events, like weddings or festivals, or spent it on unnecessary expenses, like new vehicles, and utilised a large share of the compensation in these short-term expenditures rather than using it to ensure their long-term livelihoods after the displacement. This situation is very similar to the one recorded in Chitwan after the land acquisition (see Section 3.3.2). However, the existing data on the land acquisition process and the households directly affected by land acquisitions is insufficient to monitor effectively the long-term impacts that it has had on the households affected. Overall, the only long-term impact that can be evaluated is the loss of agricultural land which represent a total of 136.3 hectares of cultivated land (KTU 1978). Considering that the Municipality and district economy is still

primarily based on agriculture and farming, the loss of agricultural land is particularly significant and represents an important opportunity cost for the local economy.

Interviews at the LDT administrative office suggested that the site has provided casual and labour work to a certain number of residents. Most positions are paid on a daily wage basis, without a contractual or permanent position nor a fixed monthly or annual salary (Table 4.7). This type of work includes gardeners, security guards, cleaners, drivers etc. One interviewee from the surrounding villages was a security guard who had been working on daily wage basis for nearly 15 years. There are some contractual and permanent positions that have been awarded to local residents from within the GLA. The estimate of GLA employees given by the LDT administrative office was one local permanent officer among 19 officers in 2017 and between 147 and 152 lower level employees, primarily on a daily basis wage, but also few on temporary and permanent contracts. There have also been very few women in the LDT workforce. Additional figures given by the LDT administrative office in 2018 indicate that only 3% of the total workforce are women, including one officer and one junior officer (Table 4.7).

Interviews in the villages have suggested that for some households the work in the LMP forms the main local source of revenue (although remittances might contribute more significantly), but a much higher number of households uses the jobs as occasional labour work for the extra income. In the village of Tenuhawa, for instance, the survey team was told that 11 people were employed regularly by the LDT but that at least 80% of households in the village had at some point had employment inside the Master Plan Area, mainly low-skilled jobs, like gardener, cleaner, driver or construction work. There is no record of employment with the monasteries, but interviews at each monastery have suggested similar types of positions available to local residents at most monasteries. At the time that the interviews were conducted, 349 employees were recorded in the monasteries, including 228 or 65% local staff working as construction workers, cleaner, kitchen staff, gardener or security guards, with few supervisory positions (Table 4.8). The employment figure, however, varies extensively, depending on the size of the monastic community, number of guest houses and on-going construction work. The total monastic resident community at the time of the survey was estimated at 230 people. The largest employers of local staff among the monasteries were the Royal Thai Monastery and the Chinese monastery, while the Cambodian, Korean and the Bodhi Institute monasteries, all under undergoing construction work at the time of the survey, also had high numbers of local employees.

Table 4.7 : LDT Employment Record (as per February 2018)

POSITIONS	TOTAL	MALE	FEMALE
Officers	17	16	1
- Senior officers	4	4	0
- Officers	13	13	1
- Contractual officers	3	0	0
- Permanent officers	14	0	0
Junior officers	11	10	1
- Contract	3	0	0
- Permanent	8	0	0
Gardeners	6	6	0
- Contract	1	1	0
- Permanent	5	5	0
Guards/Watchmen	26	26	0
- Contract	0	0	0
- Permanent	26	26	0
Service Contracts	44	42	2
- Officers	2	2	0
- Office Assistant	4	4	0
- Guards	4	2	2
Daily Wages	127	124	3
TOTAL	**231**	**224**	**7**

Table 4.8 : Number of employees in the monastic zone at the time of scoping interviews (as per February-March 2017)

Monasteries	Local Labour	Total labour
Royal Thai Monastery	31	31
Cambodian Monastery	28	47
Chinese Monastery	21	21
Korean Monastery	20	60
Tara Foundation (Great Lotus Stupa and Drigung Kagyud Meditation Centre) Ladakh	15	15
Bodhi Institute	15	15
Ka-Nying Sedrup Monastery (Seto Gumba)	12	35
Panditarama Meditation Centre	10	10
Myanmar monastery	10	10
Vietnam Phat Quoc Tu Monastery (Lam Ty-Ni)	8	8
Dharma Swami Maheraya Buddha Vihara	7	7
Geden International Monastery (Austria)	6	6
Nepal Theravada Buddha Monastery	6	10
Kharma Samtenling Monastery	5	5
Mahabodhi Monastery	5	5
Dhamma Janani Vipassana Meditation Centre	5	6
Urgen Dorjee Chholing Buddhist Centre, Singapore	3	3
United Tungaran Buddhist Foundation, Nepal	3	7
Drubgyud Chhoeling Monastery (Nepal Mahayana)	3	3
French Buddhist Association Peace Stupa	3	3
Thrangu Monastery (Buddhist Canadian Association)	3	3
Sri Lankan Monastery	3	15
Dharma Daya Sabha	3	3
Manang Sewa Stupa	1	4
Mahasiddha Sanctuary for Universal Peace	1	1
The World Linh Son Congregation, France	1	11
Zarong Tgupten Mandol Dogna Chholing, Nepal	0	unk
Nepal Vajrayana Maha Vihara, Nepal	0	5
Japanese Monastery	0	0
Gautami Bhikkuni Vihar	0	0
TOTAL	228	349

4.4.2. Social indicators

There is to a certain extent more evidence for the direct social impacts of the site, mainly because these impacts relate to the well-documented implementation of the LMP (see Appendix 9.3 for the results table). The LMP has had a well-evidenced positive impact on transportation development in Lumbini, including the construction of the domestic airport in Bhairahawa, currently being upgraded into an international airport. The first tarmac roads, connecting Bhairahawa-Lumbini-Kapilavastu, were also built as part the site development recommendations. The new road system has facilitated transport for local residents and farmers to the main market centres, with direct blacktop road connections to Bhairahawa, Butwal and Kapilavastu municipalities, but also with India and the main border crossing point at Sunauli (Figure 4.2). Through connections with the national highway network, the Bhairahawa-Lumbini-Kapilavastu road has also integrated the site within the wider national network with highway

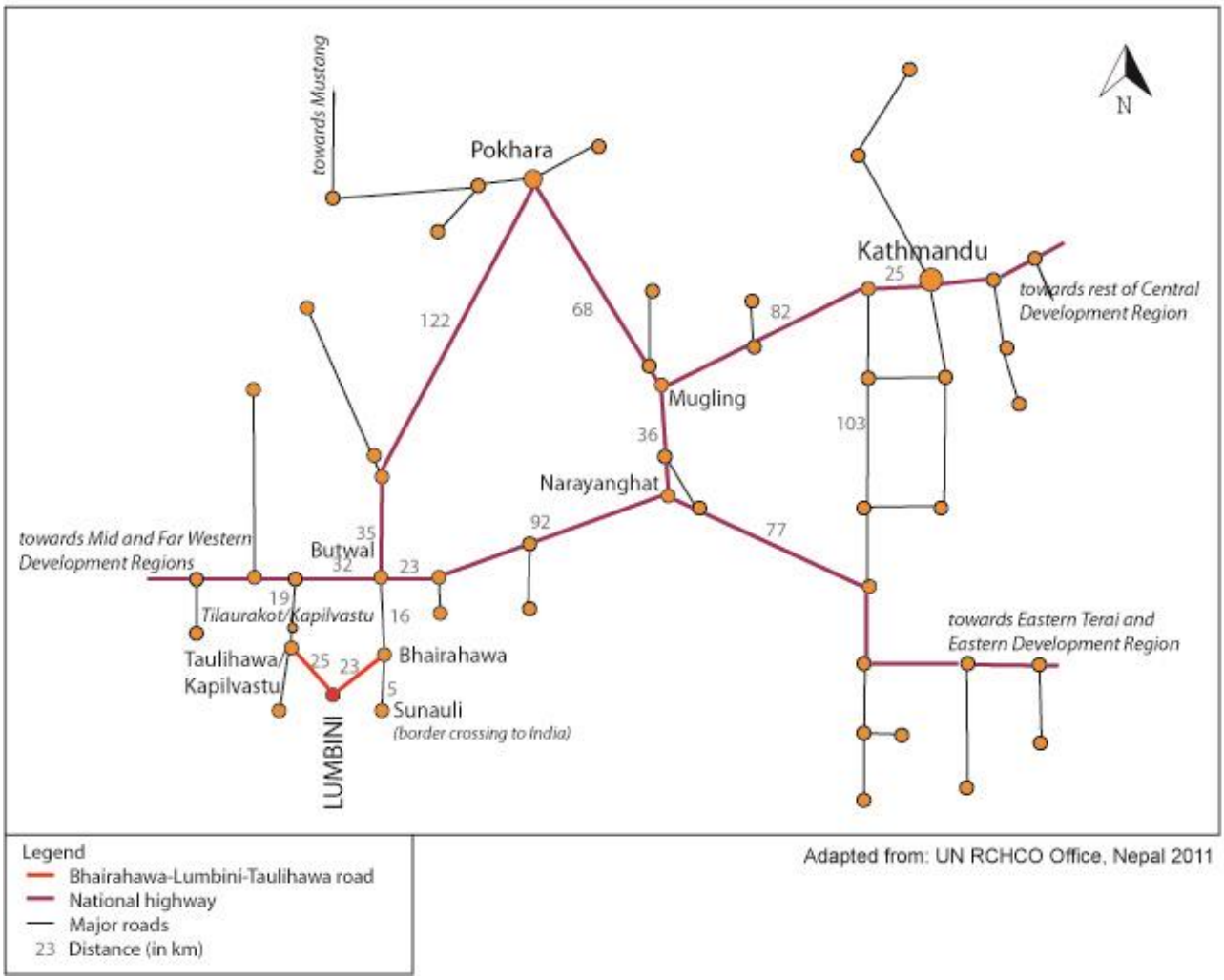


Figure 4.2 : Sketch of the Bhairahawa-Lumbini-Taulihawa road (red), national highways (in pink) and major roads (in black) connecting Lumbini to main cities and communication points in Western and Central Nepal. The Bhairahawa-Lumbini-Taulihawa road Lumbini is the main connection integrating Lumbini within the regional, national and transnational road network.

connections to both Kathmandu and Pokhara, the two biggest cities in the country. By connecting the area within a wider regional, national and transborder road network, the Bhairahawa-Lumbini-Kapilavastu road has had a central impact on the development of the surrounding villages since its construction, including on population migration, but also on attractiveness of the area for various types of businesses.

There is not sufficient data available to directly assess correlation between road construction and attractiveness of the Lumbini area itself. However, outside the Municipality, the development of factories on the other stretches of the Bhairahawa-Lumbini-Kapilavastu road is well known, with both positive economic impact on employment and production but also negative environmental impacts (Giri 2007; UNESCO 2013: 154; Suwal and Bhuju 2006: 97). Recent research suggests that the latter affect the Lumbini area as well while the direct economic benefits in Lumbini Municipality of industrial development is limited due to the industry and factory ban within the five by five miles area around the archaeological site (KTU 1978; IUCN 2013; UNESCO 2013; Meucci 2013). Despite the insufficient data to accurately measure impacts, the development of the local and regional road network has most probably been the LMP-related intervention with the highest impact on local communities.

As previously mentioned in Chapter 3, most of the social components of the LMP, the infrastructure and public facilities have not been implemented yet which indicates a limited direct impact on the development of public infrastructure. The school that was planned as part of the LMP has also not been built and there have been only very few records of educational school programmes organised by the LDT, with no specific division or budget focusing on long-term educational policy. Since 2006, some local girls have benefited from the LDT Maya Devi scholarship programme with around 10 scholarships allocated annually during the *Buddha Jayanti* festival (Dhital 2006; LDT 2009, 2010). The foundation of the Lumbini Buddhist University, based in Kathmandu with a campus in the Lumbini Cultural Municipality, was not planned in the LMP final design but is a direct result of the development of Lumbini and was a recommendation made at the World Buddhist Summit in 1998. Overall, however, since many of the more social components of the LMP were prepared to respond to recognised negative impacts of the site implementation on local communities (Section 2.4.3), the delays in their implementation suggest that the negative impacts of the site development on resident communities have not been mitigated. Short term impacts in the late 1970s-1980s included the demolition of the local school within the Sacred Garden and the only local health post (dispensary) while more long-term impacts have included loss of agricultural land, which was

meant to be mitigated by technological improvements and development of the irrigation system, along with loss of private housing spaces.

Since the 1990s, however, education, health and water access programmes have been run by the monastic community and related network of local CBOs, NGOs and INGOs which have attempted to respond to the issues that the LMP implementation has not addressed. Overall, four education establishments have opened in the local area since 2003 which can be linked to the LMP. They have been founded by the LSSF, supported notably by the Canadian Engaged Buddhism Association, and Venerable Metteya of the Bodhi Institute and active Vice-Chairman of the LDT. The LSSF is also involved in infrastructure development programmes, mainly water access, while IBS developed projects in the areas and villages directly affected by the LMP to provide water pumps and health services for local communities. The direct results of the IBS programmes include the opening of the health clinic in Mahilwar area in 1993. The health centre was also the first to develop mobile clinics and has developed a network with several layers of assistance starting with 429 contact individuals in the different villages who have been trained to provide simple medical assistance and who can call for assistance to more trained staff within the network for complex cases. Ambulance services were also first provided by the clinic in the area in 1996, working in partnership with Himalayan Exchange (Mallik 2006: 47). It had also in the mid and late-1990s a water facility programme during which it provided 321 hand pumps and 15 artisan wells to villages in six VDCs: Bhagwanpur, Lumbini Adarsha, Tenuhawa, Ekala, Khudabagar and Madhubani. Ultimately, TRPAP in the 2000s while focusing primarily on tourism also sponsored some public infrastructure projects, including toilet and drainage system in three VDCs (ibid.).

The information available for evaluating the continuity and changes in the ritual uses of the Sacred Garden by local residents is very limited and the evaluation is primarily based on cross-checking information from historical sources (travellers, researchers' accounts), international organisation consultants' reports, rules and regulations for ritual practices at the site today and a study on visitor activities in the Sacred Garden conducted as part of the preparation of the Integrated Management Framework (UNESCO 2013). Results from recent interviews and participant observations have also been used (Coningham and Acharya 2013). The indicators on religious and cultural participation have suggested that the site has been used for a diversity of religious and cultural activities, including Buddhist, Hindu and other religious or cultural festivals. It is the main focus of at least 13 annual festivals recorded by LDT staff (Rai 2010). Another 15 local or national festivals have been recorded where the site is not the central focus but for which some communities and households go to the Sacred Garden area to perform some

of the rituals involved (ibid.). Among all these festivals, five are local Hindu and Tharu festivals while 11 are specifically Hindu, 10 are Buddhist, and three cultural or mixed festivals, like the Western New Year's Eve. The *Chaitra Mela* (March/April) is the main festival still dedicated to the goddess Rupa Devi and to Maya Devi and attracts Hindu communities from Lumbini but also from the region and from across the Indian border to the site (LDT 2011: 42-3). While the records are currently very poor and limited on the latter festival, the existing evidence suggests that with *Buddha Jayanti*, the Buddha's birthday celebrations, the *Chaitra Mela* is still among the largest festivals taking place in Lumbini Sacred Garden today. The number of people attending the festival is not recorded annually and it was only recorded once in 2002 by a UNESCO monitoring mission. In March 2002, over 5,000 people were counted in the Sacred Garden on the main festival day (Coningham et al. 2010).

While the LMP has provided new opportunities to use the space for different festivals and events, in the Cultural Zone, the monasteries and the Sacred Garden areas, the site development has affected the way that local Hindu communities have used the site for ritual practices. Pre-LMP sources highlight the use of the site by the closest villages for everyday and regular ritual practices (David-Néel 1913, 2004; Dharmapala 1997; Joury 1969). With the displacement of the villages within the Project Area, one of the main impacts of the LMP implementation has been to increase the distance between the shrine and the closest villages. The comparison between the estimated distance to the Sacred Garden of the seven villages moved out of the LMP Project Area and the seven closest villages today, many of which already existed at the time, indicates that the increased distance due to village relocations is particularly significant for the closest two villages: Lumbini Bazaar was located 250m away from the Asokan Pillar and Temple while the second closest village Kirtipur was 800m away (Table 4.9). After the displacement, the closest settlements became the new Lumbini Bazaar, 950m away, Mahilwar

Table 4.9 : Distance from the Asokan Pillar of the seven relocated villages (within the LMP area in 1978) compared with the present walking distance of the seven closest villages in 2018 (in metres)

Villages within the LMP area in 1978	Lumbini Bazaar	Kirtipur	Madnagar	Harwatola	Parsa	Parsa tola	Harnampur
Distance from Pillar	250	800	1,750	2,500	3,000	3,300	3,150
Closest seven villages in 2018	Lumbini Bazaar	Mahilwar	Paderiya	Lankapur	Tenuhawa	Ramwapur	Madhubani
Distance from Pillar (m)	950	1,700	1,750	2,100	2,750	2,750	3,100

and Paderiya, both located over 1.5 kilometres walking distance. Moreover, some families have not stayed in Lumbini after the removal and moved to other areas of the Tarai or Nepal.

Therefore, by distancing the local settlements from the site, the LMP has removed the core immediate community that used to worship in the Sacred Garden shrine on a regular, daily basis. The distance to the Sacred Garden, however, can be seen as less of an impacting factor on participation for the other relocated villages which were further away from the Sacred Garden than other villages around the LMP area. The few respondents who used to live within the LMP area, who were mainly from the old Lumbini Bazaar, mentioned visiting the site regularly, for rituals and to go to the local school. Overall, the interviews in surrounding villages have tended to support this perspective that the Sacred Garden is no longer a place of daily worship, as most Hindu respondents mentioned only going to the Sacred Garden nowadays for special festivals or family rituals, including *Mundan*, the first shaving of the head for young children, or *Prasad*, which involves cooking and offering food to the deity in gratitude for a wish fulfilled. The limited records on local festivals, along with interviews, have suggested that Tharu annual rituals are also performed at the site. The results have suggested therefore continuity in special *puja* and rituals which are still performed in or around the Sacred Garden but discontinuity in the regular, everyday ritual use of the site by the immediate surrounding communities.

Table 4.10 provides the types of local ritual practices in the Sacred Garden recorded by pre-LMP sources, compared with a list of current ritual practices compiled from LDT sources, visitor surveys and participant observations conducted in recent years (UNESCO 2013; Coningham and Acharya 2013). Pre-LMP sources refer to visitors pouring oil and rubbing red powder on the Nativity Sculpture, food offerings and reports of animal sacrifices, the latter being banned in 1926 as it is a prohibited practice in Buddhism (Führer 1972: 33; Mukherji 1901: 34; David-Néel 1913; Subedi 1999). A more recent description of the rituals taking place during the *Chaitra Mela* suggests that many of these are still performed in the Sacred Garden at least on special occasions (LDT 2011: 42-3). However, many of the practices listed in the table are not allowed inside the modern shelter built over the Maya Devi Temple in 2002. For instance, candles, incense or lamps are prohibited, for safety reasons, and only limited types of offerings are permitted inside, including money and fabric. The Nativity Sculpture was the focus of local ritual activities when the site was rediscovered by archaeologists, and a replica was displayed in a separate temple previously. The conserved sculpture is now reinstalled in the Maya Devi Temple, in a niche above the visitors and the 'Marker Stone'. While gold leaf is rubbed by Buddhist pilgrims and donations are deposited on the wall below, the sculpture itself is beyond reach to perform other rituals. Outside the temple, the Bodhi Tree and the Asokan Pillar have

concentrated many of the ritual practices and offerings, including hair donations at the base of the Pillar, food and liquids offerings, red powder, candles, lamps and incense burning (UNESCO 2013; Coningham and Acharya 2013).

Regulations within the temple are not the only restriction to local ritual practices. For instance, picnics are not allowed in the Sacred Garden which has implications on the performance of the local *Prasad* ritual. The elements of the ritual which involve cooking and eating are now performed in open spaces outside the fences of the Sacred Garden, with families coming inside the Sacred Garden only to make the offering. Overall, however, there are very limited accounts or studies that have been conducted on ritual and religious practices within the Sacred Garden and local festivals.

Table 4.10 : List of local practices recorded in historical and pre-LMP sources and practices recorded by LDT (Lumbini Darpan 2011), UNESCO (2013) visitor survey and participant observation (Coningham and Acharya 2013)

Practices recorded pre-LMP	Practices recorded during LMP implementation
- Pouring oil - rubbing red powder - food offerings	- paraphernalia (including camphor, red and yellow powder, incense, oil, fruits) - Offerings paper, and plastic hats - Offering milk - Offering scented water - Offering monetary donations - Offering/throwing coins at the Asokan Pillar - Offering oil lamps - Offering butter lamps - Lighting candles and incense - Offer Karai (a metallic cooking pot)
- Chanting (women specifically) - Puja - Dancing (women specifically)	- Chanting - Pray - Devotional dances - Having Picnic and *Prasad* ritual
- Offer children's hair	- *Mundan* (first shaving)
- Reported animal sacrifices (banned in 1926)	- Banned
- References to but no description of *Chaitra Mela* in pre-LMP sources	- Temporary stalls set up for *Chaitra Mela*

4.4.3. Limitations of the existing evidence

The existing data and evidence therefore provide an incomplete, mainly qualitative overview of some of the long-term or more short-term impacts of the site development on local

communities. Impacts related to infrastructure development can be evaluated mainly based on outputs which are well documented rather than their outcomes and impacts. By contrast, while there is some data available to inform estimations of the direct economic and socio-economic impact of the LMP on the local economy and local employment, i.e. employment within the site and site managers' revenues and estimation of local expenses, the coverage is incomplete. There is also very limited existing or accessible data to evaluate the impacts of tourism and pilgrimage which would represent the main contribution of the LMP to local economic and social development and which formed one of the main objectives of the site development in the LMP conception and design phases.

By contrast, the existing evidence tends to suggest that the expected negative impacts from the site development, mentioned in the LMP final design, have not been mitigated in the implementation phases. While the long-term impacts of village resettlements cannot be evaluated due to the limited data available, including on pre-LMP land value and ownership and on the households impacted, but also the resettlement and compensation process, identifiable long-term economic and socio-economic impacts include loss of agricultural land, access to natural resources and housing space in the Municipality. The resettlement of the villages closest to the site has also contributed to redefining the role of the site in local ritual practices and the local religious and cultural engagement with the ancient site. Indirect impacts have been more positive with clear links that can be made between activities of the monastic community and their network of CBOs, NGOs and INGOs with design and implementation of health and education facilities and programmes and access to water sources. Overall, the picture provided by the existing evidence tends to indicate that the most significant impacts that can be related or directly attributed to the LMP are linked to the improvement of the connectivity and road network within the present Municipality.

Although not included in the framework due to the lack of reliable environmental statistics until recently, environmental issues, notably air, water and soil pollution, and their potential impact on public health and the visitor experience have been an increasing concern. Based on the data collected by the International Centre for Integrated Mountain Development's (ICIMOD) air quality monitoring station in Lumbini, the concentration of key air pollutants have often exceeded national and international limits "*which implies significant health risks for the residents and visitors in the region*" (Rupakheti et al. 2017: 11041). For certain pollutants, the concentration in Lumbini has even regularly exceeded levels monitored by ICIMOD's station in central Kathmandu. The preliminary studies have identified both fossil fuel combustion, from transport, industries and residential sources and biomass burning, including agro-residue

burning, waste burning and regional forest fires, as the main sources of air pollution in Lumbini (ibid.: 11048). The studies have also traced the origin of the pollutants, suggesting that a large proportion originated from the industrial regions of North India, but a significant share has also been attributed to regional emissions linked to increased agricultural activities, transport, industries and population density (Adhikary et al. 2019: 204). In a context of increasing investment in the tourism infrastructure and rapid increase in visitor numbers in Lumbini, the environmental costs of the site development will be important elements to consider in future evaluation of the site's impacts and sustainability.

4.4.4. Origins of data gaps

The data gap analysis has indicated that the social and economic data for the period of study (1970-present) is scarce and dispersed among different local, regional and national offices and organisations. These factors make access difficult but also induce important gaps in the datasets that are available including incomplete coverage and poor comparability of data across different sources, especially as data is usually only available as aggregates. The only accessible administrative data that has been identified covering the period between 1970s and 1980s comes from the National Population Censuses (1971, 1981). Other sources for the period before the Master Plan include few observations about local communities made by international missions in their reports (UN, UNDP), the data collected by the UN community advisor and the data collected from the 1966 National Tourism Plan (Alkjaer 1968: 21; de Paor 1968: 2). The Hotel Association of Nepal was founded in 1966 and therefore began to record registered hotels in Lumbini from the offset of the LMP implementation. In the 1990s, international visitor numbers (excl. Indian visitors) started to be collected by the LDT. In 2008, the Bhairahawa Tourism Board started to register one-star and budget accommodations. There has been an increasing number of consultant reports and researchers' publications since the 2010s, notably commissioned by UNDP, UNESCO, ADB and WB/IFC. While they provide inventories of businesses and reviews of the LMP implementation and other information based on secondary data collected from local and administrative sources, the primary data is mainly based on qualitative information and few of these provide additional quantitative data to evaluate social and economic indicators. Overall, the data gaps have reduced over time, from the early phases of the Master Plan until present, but there are still important limitations in the current datasets to effectively measure all indicators of the social and economic impact of the site development and the associated tourism industry.

The results of the data gap analysis have been partly caused by the nature of the management system and procedures in Lumbini, including the limited interaction and coordination between

site managers which answer directly to the Ministry in Kathmandu and the different regional and local actors, including the former VDCs and present Cultural Municipality and district administration offices and development partners (Weise 2013). The local and district administrations have no data on activities taking place within the LMP Project Area. By contrast, while the ADB-funded SATIDP produced for the LDT an inventory of hotels and guest houses in Lumbini in 2012, the rapid increase and changes in the sector has already made this list outdated without the inputs of municipal, district and national registration offices. The Integrated Management Framework that was drafted in 2013 already emphasized the importance of cooperation and coordination between site managers and local authorities of integrated the latter within the institutional framework as associated authorities, establishing a formal process for notifying, consulting and resolving conflicts between these stakeholders (Weise 2013: 10).

The data gap issues, however, are also linked to broader national data management challenges related to Nepal's recent political, legal, administrative, economic and social history. The last half-century has been marked by political instability, which has affected both local and national administrations (Whelpton 2005; Kergoat 206; Gellner and Hachhethu 2008). The quick succession of administrations, including within the LDT but also in national and local administrations, has made traceability of data challenging. This is currently reflected in the transition from multiple VDCs into one single Lumbini Cultural Municipality since 2013. All VDCs in Nepal produce regular Population Profiles with data on demographics, education, public infrastructure and local community groups, among other key information. However, at the time of the data collection, most of the previous Population Profiles were not available. One former VDC secretary whom we interviewed came to the meeting with the last population profile done in his VDC, the only copy that was found. The Municipality had no access to long-term local data although it was at the time finalising its own population profile.

The administrative data availability, accessibility and reliability is also affected by limitations specifically related to data production, sharing and use within Nepal's data management system. Issues with data disaggregation, often related to how the data has been digitised, have been recognised in the latest reports (NPC 2017; CBS 2017). Most data from censuses, surveys and administrative reports are available online as aggregate data, often at national level and occasionally at district level, and few requests to obtain data at the village or municipal level were successful. Especially for earlier censuses and reports, it is unknown whether the local level datasets are currently available. The national data management strategy produced by the Central Bureau of Statistics is currently attempting to tackle some of these issues with disaggregation and digitisation. Additional resources have been made available to improve the

national data management as part of the SDGs' reporting objectives (NPC 2017; CBS 2017). Language has been a barrier, with some information only available in Nepali, for certain types of administrative data, notably the Rupandehi District industry registration data and national data from the Inland Revenue Office. For the latter, however, the language barrier has had minimal implications for the research since the aggregate figures were not accessible at the local level. It was possible for smaller datasets, like hotel and shop registration lists, to translate them in the field with surveyors providing support.

4.5. Developing a gap-closing strategy

Appendix 10 provides an overview of the gaps identified for the evaluation and monitoring of the social and economic impacts of Lumbini development, covering both social and economic indicators. It identifies actions that would be required from site managers to bridge the gap, including internal or commissioned primary data collection. In many cases, however, further coordination and collaboration with the respective authorities is required to gather key data for evaluation the social and economic impact of the project. Ultimately, in addition to the list of sub-indicators developed for the research framework, other environmental and tourism indicators would need to be integrated in future monitoring and evaluation of the social and economic impact of the site development.

Based on this assessment, a primary data collection methodology was therefore developed to start bridging existing gaps and/or provide initial data to understand current impacts of tourism and heritage on local communities. Prioritisation for the data collection was based on two main considerations: 1) needs and the data that is necessary to collect to develop a better understanding of the current situation and monitor and evaluate impact of on-going or planned projects, and 2) the capacity to collect the data using rapid assessment methods. Based on this prioritisation, a data collection methodology was developed, using visitor and business surveys alongside household, resident and key informant interviews. The surveys and interviews were designed to provide a combination of quantitative data and qualitative information to measure impacts based on selected social and economic indicators but also to identify factors encouraging or limiting positive and negative impacts for local residents. This primary data cannot provide a long-term perspective of impacts of the LMP over time but offers a snapshot of the current context.

The primary data collection took place over several phases, starting with the scoping research undertaken in January-March 2017. Visitor and business surveys were undertaken in several phases within a one-year period, between February 2017-2018. Another short visit was

undertaken in Lumbini in January 2019 to conduct additional follow-up interviews and collect additional qualitative information to complement the quantitative data collected through the surveys. This section provides an overview of the methodological approach that was used, from the initial scoping phase to the design and administration of structured questionnaires and the data processing and analysis. Each data collection method had different objectives, design and sampling strategy and required different approaches to data and information processing and analysis. This section therefore reviews each of them individually, but also discusses how they complement each other in order to bridge some the existing data gaps to evaluate the social and economic impacts of Lumbini development.

4.5.1. Scoping interviews

In the initial stages of the research, scoping interviews and visits were conducted in Lumbini between January and March 2017 to identify the key actors and sources of information, collect existing data at the local level and better understand the current perceptions of the economic and social impacts of LMP. These results were compared with the conclusions of previous interviews and research conducted in Lumbini. The information gathered from the scoping interviews informed the design and preparation of the surveys and structured questionnaires. The scoping interviews can be divided into three groups:

- Key informant interviews, with representatives from local administrations, the tourism business sector, the civil society and site managers;
- Interviews with the monastic community from the Lumbini Monastic Zone;
- Interviews with local households in surrounding villages.

Different approaches were used for each of these groups which are summarised in Table 4.11. For the monastic community and local household interviews, interview sheets were prepared which had both open and closed questions structured around key themes. The complete interview sheets can be found in Appendix 11. The preparation of these interview sheets was informed by the existing literature which recorded certain dynamics between actors and differences in perceptions among different population and community groups in Lumbini (Pandey 2007; Molesworth and Müller-Böker 2005). They cover themes such as the history of the site, the perceptions and uses of the different areas of the LMP by local residents, communities and population groups, local businesses and employment in tourism or in the Master Plan area and social programmes provided by monasteries or related charities. The sheets were designed to give space for discussions without following a fixed sequence of questions but provided examples of questions for each theme to support surveyors during

interviews. The interviews were conducted primarily in either Nepali or Hindi with two Nepali surveyors working in the development field. They were briefed beforehand by the author who was also always present during the discussions and interviews. A LDT junior officer also supported the team in the initial stages, especially for interviews within the LMP area.

Table 4.11 : Scoping phase data collection methods

Interview Groups	Type of interviews	Sampling Strategy	Number of interviews	Data Collected
Key informant	Open-ended interviews	Representatives of key stakeholders	16	Documentation Stakeholders' perspectives Practitioners' viewpoints
Monastic Community in the LMP	Semi-structured interview, using an interview sheet	One interview at each monastery, with monk/ nun or staff supervisor or senior staff	29	Monastic organisation Monastic life and residents Employment Guest houses Social programmes Construction history of monastery
Local households	Semi-structured interview, using an interview sheet Household, individual and focus group interviews	Cluster sampling (by former VDC) Some targeted interviews (i.e. Tharu handicraft producers) combined with random sampling in each cluster	32	Respondents' personal and family history Present use of LMP Impact of LMP landownership and livelihood

As there is a limited number of monasteries within the Sacred Garden, visits and/or interviews were conducted at all of them. Interviews were done with a member of the monastic community, a supervisor or senior staff member. By contrast, a sampling strategy had to be applied for household interviews. A cluster sampling was used, based on the boundaries of the former VDCs. This level of sampling had the advantage that it could be associated with demographic data collected as part of the 2011 National Population Census, because in most cases local population profiles were not available or accessible. In each cluster, the sampling

Figure 4.3 : Scoping focus group in the village of Tenuhawa, with men from the Muslim community
(Photo: Author, February 2017)

strategy combined random interviews with individuals, families or focus groups and some targeted interviews (Figure 4.3). The targeted interviews were based on respondents' information or on available demographic data to ensure that a diversity of communities from each area was included. A total of 32 interviews were conducted in villages from all the wards surrounding the LMP, with both Hindu and Muslim communities but also Tharu households to include views from different population groups. Female and low caste respondents, however, remain under-represented in the final sample, with therefore fewer responses available on the perceptions on the LMP development among these two specific marginalised groups.

Key informant interviews were prepared individually and structured around specific themes and questions, based on the interest and scope of actions of each stakeholder. The key stakeholders were identified based on the key sources identified in the data gap analysis and the results of previous research and interviews. Overall 15 people were interviewed from 11 public or private organisations, including the Municipality, the district offices, LDT, international organisations' consultants, and hotels and five shop and restaurant owners (see Appendix 12, for complete list). The information collected through these interviews included internal documentation and data on tourism or heritage management in Lumbini, but also a better understanding of stakeholders' perceptions of the current role and potential of the site for local development. Moreover, these interviews were used to develop an initial understanding of how they have used the LMP in their activities and actions, how each defined their role within tourism and

heritage activities but also how they defined the other stakeholders' roles. These initial interviews therefore were used to provide an overview of the dynamics between the different local actors.

The results of the scoping interviews were analysed by themes and compared across different stakeholders, communities living in Lumbini and informants to identify similarities but also differences in viewpoints between them. Moreover, the information was used to redefine the stakeholders and communities involved and impacted in different ways by the development of Lumbini. This scoping phase notably provided the opportunity to test ways to record the complex local caste and ethnic group system, which combines indigenous groups, with populations originally from the Hill and mountain regions and populations from the Tarai and North India. Moreover, different hierarchical caste systems exist within both Hill and Tarai communities. The scoping phase was therefore used to verify the sensitivity of questions related to caste/ethnic communities and how to enquire and record this information. This was particularly relevant for the design of the business survey to characterise employment in the local tourism sector. For instance, the scoping interviews were used to test whether direct enquiries about caste/ethnic group of staff or owner in surveys would be perceived as sensitive or problematic. The results were therefore used to inform the design of the surveys and provided several avenues for research and understanding of the factors affecting local participation and economic and social benefits.

4.5.2. Visitor survey

The outcomes of the data gap analysis indicated that there was limited data available on visitors' practices and spending and their contribution to the local economy. The visitor survey was therefore used to gather measurable data on sub indicator '1.1.2. Visitor Spending per Person per Group', but also to identify leakages to evaluate the current economic impacts of visitors and inform how the latter could be increased in future developments. The overall design of the questionnaire, including wording and sequencing of questions, followed commonly agreed principles (Gray 2014: 352-75; Oppenheim 1992). The complete visitor survey questionnaire can be found in Appendix 11. It was structured in three sections:

1) General information about respondent: including demographic data like nationality, gender, age, religion, and the type of groups, i.e. family, friends, single traveller, etc.;
2) Specific information about their visit: including length of stay, trip organisation whether it was a package tour or organised independently, sites visited, modes of transportation used;

3) Visitor spending: including total spending but also spending by type of expenses (accommodation, transportation, food/drink, tour guide services, entrance fees and souvenirs/gifts/shopping).

The first section provided data to analyse visitor spending based on the characteristics of different groups. The second section was focused on visitor activities to better understand how their practices affected their spending, including overnight stays, use or no use of local transports or other services and goods. The questionnaire was mainly based on closed or multiple-choice questions rather than open questions to facilitate statistical analyses (Oppenheim 1992: 114). Some of them, specified on the form, allowed for multiple answers. The multiple choices were informed by tourism studies' classifications, but also by the specificities of the tourism and pilgrimage offer in Lumbini, notably for mode of transportation (Q9) and type of accommodation (Q10).

Some of the categorisations and typologies used in the questionnaire need additional clarification. There is an extensive literature on the categorisation of travellers, from explorers to independent travellers to mass organised tourists (Cohen 1972, 1979; Smith 1977; Gladstone 2005), but for the purpose of this questionnaire, the type of travellers (Q8) was split into two categories, package tours and independent travellers. As the research question focuses on the social and economic impacts of visitors, this dichotomy enabled analysis of different spending patterns and associated leakages between groups whose trip was organised by an external, often foreign or Kathmandu-based, tour operator and groups who were self-organised. Package tours included groups for which at least both transportation and accommodation were organised by a tour operator paid in advance (Wong and Kwong 2004: 581). This includes large all-inclusive organised tours but also families, friends, couples or single travellers who had gone through a tour operator or travel agent to organise at least both their transportation and accommodation. All the other groups were considered as independent visitors, including groups who had hired a driver or a tour guide but organised their own route and/or their accommodation in Lumbini. The choices listed for purpose of visits (Q7) were selected based on commonly used categories in the tourism literature but focusing also more specifically on motives associated with heritage. Categories widely used in tourism studies include leisure, business, education, family/friend visit and religion (UN DESA 2010: 24). Religion and pilgrimage are also closely linked in heritage literature. In addition to these, more heritage-specific motives include nature, heritage/sightseeing and living culture (Timothy and Nyaupane 2009: 8-10). The heritage/sightseeing category referred specifically to visitors who were interested in the material remains, including archaeological sites, monuments, museum collections, etc. By

contrast, living culture is related to visitors interested to see and/or experience the rituals, practices and way of life of worshippers and local communities associated with the site today (ibid.: 9-10).

The visitor survey was conducted in three phases. The first phase was carried out for five days, from 1st to 5th March 2017, with the team surveying at key locations within the LMP Project Area. At the same time, another team was set up to undertake a longer-term data collection at the Lumbini Museum. With the support of the Lumbini Museum Director and his staff, surveys were distributed between March and July 2017. Finally, a short five-day survey was undertaken at the entrance of the Sacred Garden between 26th January and 1st February 2018, to complement the samples for certain key groups, notably foreign visitors and package tours. Nine surveyors collected the data at five different locations within the LMP Project Area. The surveyors included tour guides, Lumbini Museum staff and university students. At the Lumbini museum, questionnaires were available in Nepali and English. At other locations, the surveyors conducted the interviews with the visitors with a form in English. The survey team altogether covered a wide range of languages, including English (all), Nepali, Hindi and local Tarai dialects. However, for some visitor groups, notably from South East and East Asia who spoke limited English and no Nepali or Hindi, the language barrier was at times challenging to overcome. All surveyors were trained in survey procedures and briefed on the content of the questionnaire. While the Museum surveyors were able to request responses from all groups coming to the museum, due to the low number of visitors, a sampling strategy had to be applied at other locations in the LMP. The surveyors were therefore instructed to request interviews from all international groups and conduct random interviews with Nepali and Indian groups.

The data collected by the survey team was then processed and analysed by the author. The data analysis was conducted in two phases, with an initial stage focused on producing descriptive statistics on the sample collected, i.e. residence and nationality, religion, age group and gender of respondents, types of groups, etc., but also based on their purpose of visit and type of travellers (i.e. package tour vs independent travellers). The analysis of visitor spending required additional steps. As the data was collected for each group, the group total spending was averaged per person per group for each category to avoid biases due to group size, with large disparities between small and larger groups. This data was then cross-tabulated with responses related to visitor practices and spending patterns. The cross-tabulations were used to produce an initial descriptive statistical comparison of different visitor groups based on means and distributions.

Based on the results of the cross-tabulations and research questions, logistic regressions were conducted for selected variables to verify/confirm possible relations between them, using the software Stata. Logistic regressions estimate the probability of a response based on at least one predictor or independent variables. Some of the variables were recoded from the original dataset to facilitate the logistic regression analysis. The complete list of recoded variables is provided in Table 4.12. For instance, individual visitor spending data was recoded as an ordinal variable with five spending categories: 1) No spending 2) Low, 3) Medium-Low, 4) Medium-High 5) High spending. Total spending was categorised slightly differently, since nearly all visitors had spent some money during their visit, therefore the lowest category was adapted to include 'No or Very Low spending' (<500NPR in total), but otherwise followed the same classification. For purpose of visit, the approach chosen was to recode it as a binary variable with two possible events, Tourism (0) and Pilgrimage (1). Pilgrimage was defined as visitors solely coming for religious purposes and Tourism as all other groups with other or multiple reasons for visiting the site whether or not it included religion. While there is a rich literature debating the dichotomy between religious travel/pilgrimage and tourism (Gladstone 2005; Olsen and Timothy 2006; Nilsson and Tesfahuney 2018), this categorisation was used in the case of Lumbini to evaluate whether visitors coming purely for religious reasons and/or groups on a pilgrimage tour generated more or less income than other visitors but also whether they had different spending patterns than other groups with more diverse or other motives for visiting Lumbini.

The logistic regressions were used to examine more specifically three relations:

1) Determinants of total spending
2) Determinant of length of stay in Lumbini for Nepali/Indian visitors, other Asian visitors and other Foreign visitors
3) Determinant of specific expenditures (souvenir shopping, transportation, food and drinks, accommodation, etc.)

In all three relations examined, the dependent variables were ordinal, non-binary variables, therefore ordinal logistic regressions were used to analyse the three relations (McCullagh 1980; Tutz 2012; Yang 2014b). The regression equations for each model are provided in Appendix 14. The predictors in all models combined both binary variables but also categorical variables with more than two outcomes. The first relation tested was the determinants of total visitor spending. The model tested the results of Total Spending (V17), with predictors being Group Type (V1), Nationality (V3), Religion (V6), Purpose of visit (V7), Travel Type (V8), Length of Stay

Table 4.12: List of variables used in regression analyses to determine predictors of visitors' spending and length of stay in Lumbini

Variable	Case 1	Case 2	Case 3	Case 4	Case 5
V1_Group	1_Family/ Friends	2_Single/Couple	3_ Organised Tour Group	-	-
V2_Gender	0_Female	1_Male	-	-	-
V3_Nat	1_Nepal/India	2_Asian	3_Other foreigners	-	-
V4_Nat_Binary	0_Nepal/India	1_Other foreigners	-	-	-
V5_Age	1_18-35 (Young)	2_36-65 (Middle)	3_Over 65 (Senior)	-	-
V6_Religion	1_Buddhist	2_Hindu	3_Christian	4_Muslim	-
V7_Purp	0_Tourism	1_Pilgrimage	-	-	-
V8_Package	0_Independent	1_Package	-	-	-
V9_Overnight	0_No overnight	1_Overnight	-	-	-
V10_Length_of_stay	1_Half-day	2_One day	3_1 night	4_2 nights or more	-
V11_Accom_Type	0_No accomm	1_Monasteries	2_Hotel/Guest house	-	-
V12_LumbiniOnly	0_Visit only Lumbini	1_Other sites	-	-	-
V13_Accom_Spending_Categ	0_No spending	1_1-500NPR (very low spending)	2_501-1500NPR (Low spending)	3_1501-3500NPR (Medium spending)	4_>3500NPR (High/Very high Spending)
V14_Transp_Spending_Categ	0_No spending	1_1-100 (very low)	2_100-300 (low)	3_301-500 (medium)	4_>500 (high-very high)
V15_Food/Drink_Spending_Categ	0_No spending	1_1-100 (very low)	2_100-300 (low)	3_301-500 (medium)	4_>500 (high-very high)
V16_Shopping_Spending_Categ	0_No spending	1_1-100 (very low)	2_100-300 (low)	3_301-500 (medium)	4_>500 (high-very high)
V17_TOTAL_Spending_Category	0_0-500NPR (no/low spending)	1_501-1000NPR (low spending)	2_1001-2500NPR (average spending)	3_2501-5000NPR (high spending)	4_>5000NPR (very high spending)
V18_TotalSpending_Binary	0_<500NPR	1_>500NPR	-	-	-

(V10), No other site visited in Nepal (V12). As the model considered spending per group, variables linked to individual respondents, including age and gender, were not included in the model. Moreover, due to several issues with this type of data collection especially in the research context of Lumbini, tourist income was not collected in the questionnaire, although it is commonly agreed that it is an important determinant of spending (Brida and Scuderi 2012; Wang and Davidson 2010). Missing values, poor response rates and reliability of responses have often been issues related to this type of data collection, even when categories of income have been provided in the questionnaire (Brida and Scuderi 2012: 15; Downward & Lumsdon, 2003). These problems were further enhanced in this particular research by the diversity of visitors interviewed, including local but also international visitors and package tours from diverse countries, making comparisons between responses and generalisation on the whole group particularly complex and increasing errors/biases related to currency conversions and measurements. It was also perceived that questions related to income was particularly sensitive in the context where the surveys were taking place, within a religious and sacred site. Instead, nationality, with its three categories, Local, Asian, and International visitors, is the closest to providing a proxy for an income variable, although not equivalent.

The second relation was the determinants of length of stay in Lumbini for Nepali and Indian, Asian and other foreign visitors. The model therefore tested for each category successively the result of Length of Stay (V10) with the following predictors Group Type (V1), Religion (V6), Purpose of visit (V7), Travel Type (V8) and No other site visited in Nepal (V12). The ordinal logistic regression was computed for the whole sample and then separately for each nationality group. The final relation focused on the determinants of visitor spending by types of expenses, notably souvenir and shopping. The ordinal logistic regression was computed successively for each type of spending as dependent variable, with the following predictors Group Type (V1), Nationality (V3), Accommodation Type (V11), Purpose of visit (V7), Travel Type (V8) and No other site visited in Nepal (V12). Accommodation Type (V11), Overnight Stay (V9) and Length of Stay (V10) are three variables that have strong correlations and therefore cannot be used in the same model. In this case, the variable on Accommodation Type (V11) was used because it differentiates between groups staying in monasteries and groups staying in guest houses, lodges and hotels. It therefore offered the possibility to compare spending patterns between groups staying in different accommodations.

The results and statistical significance made in a logistic regression model are dependent on several factors, including sample size, case occurrences, and missing values along with the selection of independent variables considered in the study and the relation between the latter

(Wickens 2014: 27; Agresti 2010: 196-8; Greenland et al. 2016; Green 1991; Soley-Bory 2013). The selection of independent variables was informed by existing data and tourism literature on visitor spending (Stynes 1999; Brida and Scuderi 2012; Wang and Davidson 2010), but also by the results of the scoping research. To evaluate the statistical significance of the results for each model, commonly used statistical tests were performed. The p-value was used to test the probability of the observed value, or a more extreme value, to occur by chance if there was in fact no relationship between the two phenomena (Wasserstein and Lazar 2016: 132). The lower the p-value the higher the statistical significance is. The convention value of $p \leq 0.05$ was used as the threshold for the significance level: when the p-value was below 0.05, the results were considered statistically significant while when the p-value was above, the results were considered inconclusive. The latter outcome indicates that the statistical analysis and results based on the collected data were considered too uncertain to demonstrate or not the existence of a relation between the dependent and an independent variable. Rather than only presenting the regression coefficient obtained for each independent variable, the confidence interval was also calculated and presented with the results. The latter provides a lower and higher limit within which the coefficient for the whole population should be, based on the sample results, with a level of 95% confidence. The likelihood Ratio Chi Squared (LR2 Chi2) was used to evaluate the goodness-of-fit, or how closely the ordinal logistic regression results summarise all the individual observations in the dataset.

The interpretation of the results and the relation between dependent and independent variables were based on the predictors' regression coefficient but also the odds-ratio. The latter provides a relative measure of effect, by comparing the odds of an outcome between two cases. In a binary variable, for instance, a negative coefficient and odds-ratio $OR < 1$ indicate that the odds are lower for case (1) to happen than case (0), controlling for the other predictors while a positive coefficient and odds-ratio $OR > 1$ suggest a positive relation and higher odds for the former. The confidence interval was also calculated for the odds-ratio to present the interval within which the 'true' odds-ratio coefficient should be, at a level of 95% confidence.

4.5.3. Business survey

The complete business survey questionnaire can be found in Appendix 11. This survey was conducted to bridge some of the gaps identified related to the economic and socio-economic indicators of the analytical framework, notably:

- 1.2. Business creation (sub-indicators 1.2.1 – 1.2.3)
- 1.3. Income generated by the tourism sector (sub-indicators 1.3.1 – 1.3.3)

- 3.1. Direct employment (sub-indicators 3.1.1 – 3.1.2)
- 3.2. Distribution of employment by gender (sub-indicators 3.2.1 – 3.2.2)
- 3.3. Income poverty reduction (sub-indicators 3.3.1 – 3.3.2)

The questionnaire first collected general descriptive information on the business, location, owner's name, type of business, opening year, etc. For hotels and guest houses, an additional section asked respondents about the room and bed capacity, prices and annual occupancy rate. The second section of the questionnaire focused on the business expenditures by category identified based on the scoping interviews and income. The latter was split into daily, monthly in low and high season and average yearly. The third section focused on the socio-economic indicators, i.e. ownership and employment by gender and caste/ethnic groups. Ultimately, the last section collected data on the respondents, including job position, gender, religion, caste/ethnic group, age and whether their household had another source of income.

The business survey was conducted between 23rd-29th January 2018, over five days, with a few additional interviews conducted in February 2018 due to the unavailability of owners and managers during the survey period. The survey was undertaken with a team of three surveyors, two students from Lumbini Buddhist University and the author, who administered the survey and filled in the forms based on respondents' answers (Figure 4.4). The author interviewed English-speaking respondents while non-English speakers were interviewed by the other surveyors. An initial test was done on the first day of the survey with minor adjustments made

Figure 4.4 : Surveyor conducting an interview in a hotel in Parsa Chowk
(Photo: Author, February 2018)

to the questionnaire, mainly to ensure consistency between surveyors. A total of 105 businesses were surveyed including hotels and guest houses in Lumbini and restaurants and shops within the Municipality and the LMP. A different sampling strategy was applied to hotels/guest houses and other tourism businesses. Since there are relatively few hotels and tourism businesses in Lumbini, the team aimed to interview all or nearly all hotels and guest houses in the Municipality. The Siddhartha Hotel Association of Nepal's (SHAN) hotel list was initially used to identify hotels and guest houses, but as not all businesses register with the association and the locations of hotels and guest houses are not mentioned the team covered all areas within and around the LMP (Appendix 13). The hotels that were not interviewed were either closed at the time of the survey or were registered by SHAN but their location could not be identified during the survey.

By contrast, the sampling method for restaurants and shops were based on zoning. In each location, between one third and one quarter of all restaurants and shops were surveyed. Overall, among the 105 businesses interviewed, 50 were hotels, 33 shops, 17 restaurants, 3 travel agencies and two 'Other', which were one of two cycle rentals in Lumbini and a large tea shop in Lumbini Bazaar. Figures 5.18-5.19 in the following chapter (Section 5.3.1) provides the total number of businesses recorded at each location by types (hotels/guest houses, restaurants, shops, etc.) and the numbers surveyed. In terms of respondents, whenever possible the owner and/or manager of the business was interviewed. When both were unavailable, a member of staff, usually the most senior or longest in employment, were interviewed instead (Appendix 16). Respondents were free to refuse to answer all or any question during the interview. Questions regarding income and expenditure were found to be the most challenging by the surveyors but overall the response rate was fairly high for all questions. The survey does not include other types of tourism businesses without a fixed location, like taxi and rickshaw drivers.

The analysis of the business survey results followed a similar process to the visitor survey. Descriptive data was first produced on the sample collected, including number by type of businesses and areas, number of employees, or opening years. The diverse caste and ethnic groups recorded among owners and employees were categorised to enable statistical analysis. To respond to the key objectives of the business survey to analyse the distribution across different population groups and communities, the categories needed to reflect the presence of Tarai indigenous groups (Tharu population), the caste hierarchy and the differences between populations originally from the Hill regions and from Tarai/lowlands. Based on existing literature and the scoping interviews, the latter differentiation Hill/Tarai tends to be based on caste/ethnic

group names that are associated with the Hill regions and caste/ethnic group names that are associated with the Tarai region which have a stronger Indian influence (Whelpton 1997: 68-9; Jha 2017). For the descriptive analysis, they were therefore categorised as follows: 1) Hill Brahmin/Upper Caste, 2) Hill Dalit/Low Caste, 3) Other Hill Caste/Ethnic Groups, 4) Chhetri/Upper Caste (undifferentiated Tarai or Hill), 5) Tarai Brahmin/Upper Caste, 6) Tarai Dalit/Low Caste, 7) Tharu, 8) Muslim, 9) Other Tarai Caste/Ethnic Groups. The counts on business ownership and employment by gender and caste/ethnic groups were then cross-tabulated with types of businesses to identify differences between groups and businesses. The data on employment by gender and caste/ethnic groups was also cross-tabulated with types of business owners to identify differences in distribution.

Based on the results of the cross-tabulations and research questions, different regressions were used to verify relations between variables. The small size of the sample was one of the main challenges at this stage to ensure that the observed results and variations were statistically significant and to avoid overfitting or results that fit too closely this particular set of data and fail to represent the entire population (in this case tourism businesses in Lumbini). Due to the small sample size, it was particularly important to avoid multi-colinearity, with strong correlations between independent variables (Gujarati 2003: 348-9). Owner's birthplace had a strong correlation with Hill/Tarai variable, and therefore the former was not included in the regression models. The one in ten rule which states that one predictor can be studied for every ten events (Peduzzi et al. 1995, 1996) was used as a general rule of thumb, although it was considered that in this particular context, with a finite population and where the sample represents at least a quarter of each type of tourism businesses in Lumbini and over three quarters for hotel/guesthouses, the rule could be relaxed as suggested by recent studies (Vittinghoff and McCulloch 2007). For variables which had fewer events/cases, the number of independent variables was reduced to two predictors only. In some cases where there were too few events, the variable was not considered in the models. That includes business owners' gender, with number of female owners and Muslim employees being very low, for instance, with less than 10 cases. For the models tested, the same statistical tests were applied as the visitor survey, including p-value, confidence intervals and the Likelihood Ratio Chi Squared.

Most variables were recoded with fewer categories, in either binary or ordinal variables (Table 4.13). Variables related to business owners were based on the caste hierarchy (V3) and the regional Hill/Tarai dichotomy (V2). The former was divided into three cases low castes and marginalised groups, upper castes and other/middle-castes). The latter separated Hill caste/ethnic groups from Tarai caste/ethnic groups, including Muslim and Tharu populations

within the latter. Employment variables have been particularly problematic as a large share of businesses had no employees, with therefore limited occurrence of other cases, where the observation was above 0. Due to the differences in the numbers per caste/ethnic groups, some of the employee categories, mainly Women (V7), Dalit (V10) and Tharu (V9) employees, were recoded as binary variables, with two outcomes, 'Not represented' (0) and 'Represented' (1) in the workforce. The Tarai Employees (V8) variable was recoded as ordinal variables with four outcomes: 1) Not represented at all, 2) represented <33%, 3) Represented between 33% and 65% and 4) Represented 66% or more of the total workforce of the business. As mentioned previously, due to the extremely low number of observations (below 10), Muslim residents' employment (V11) in tourism businesses could not be analysed using a logistic regression. The binary variables were analysed using a logistic regression while for the ordinal variables, ordinal logistic regressions were applied which already discussed in the visitor survey section. The following models were tested (the equations are provided in Appendix 14):

Table 4.13: List of variables used in regression analyses to determine predictors of tourism business ownership and employment in Lumbini

V1_Type of Business Small businesses Hotel/Guest House
V2_Owner's caste/ethnic group by region Tarai Hill
V3_Owner's caste/ethnic group by caste hierarchy Upper Castes Other/Middle Castes Marginalised Groups Foreigner/Other
V7_Presence of female employees No Yes
V8_Share of Terai employees 0_None 1_1-33% workforce 2_33-74% workforce 3_75% or over
V9_Presence of Tharu employees No Yes
V10_Presence of Dalit/ Low Caste employees No Yes
V11_Presence of Muslim employees No Yes

- Logistic regression models

- Model 1: determinants of business ownership, with type of business (V1) as the dependent variable and Hill/Tarai (V2) and owner's caste group (V3), as independent variables;

- Model 2: determinants of women employment, with presence or absence of female employees (V7) as dependent variable, and types of businesses (V1), Hill/Tarai (V2) and owner's caste group (V3), as independent variables;

- Model 3: determinants of Tharu employment, with presence of absence of Tharu employees (V9) as dependent variable, and types of businesses (V1), Hill/Tarai (V2) and owner's ethnic/caste group (V3), as independent variables;

- Ordinal logistic regression model:

- Model 4: determinants of Tarai group employment, with proportion of Tarai employees in the workforce (V8) as dependent variable and types of businesses (V1), Hill/Tarai (V2) and owner's ethnic/caste group (V3), as independent variables;

For certain employment variables, mainly total number of employees, but also Hill caste/ethnic group employees and upper castes, there were sufficient range of observations to conduct a regression, using each discrete variable on numbers of employees per businesses as the dependent variable. As the distribution of responses is skewed towards 0, a negative binomial regression was used (Orme and Combs-Orme 2009; Hilbe 2011). The analysis was therefore done on the full range of employee figures for these two variables. The following models were used:

- Negative binomial regression models:

- Model 5: determinants of Hill group employment, with number of Hill employees in the workforce (V13) as dependent variable and types of businesses (V1), Hill/Tarai (V2) and owner's ethnic/caste group (V3), as independent variables;

- Model 6: determinants of upper castes employment, with proportion of Brahmin/Chhetri employees (V14) as dependent variable and types of businesses (V1), Hill/Tarai (V2) and owner's ethnic/caste group (V3), as independent variables;

While the logistic regressions used odds-ratios to present the results, the regression coefficient was used for the negative binomial regressions. These are interpreted as follows: given the other independent variables are constant, for a one unit change in the independent variable, the difference in the expected counts' log of the dependent variable can be expected to change by the regression coefficient.

4.5.4. Ethical considerations

Prior to the fieldwork in Lumbini, ethical approval for the primary data collection was obtained from the Department of Archaeology's Ethics Committee, following Durham University's research ethics policies. The different primary data collection methodologies used in the thesis, including surveys and interviews, raise a certain number of ethical concerns related to the

involvement of human participants in research. Ethical considerations in this type of research are classified into four categories (Gray 2014: 75; Zikmund et al. 2013: 88-93; Hair et al. 2015):

- Ensure informed consent for participants,
- Respect of participants' privacy and confidentiality,
- Avoid harm to participants,
- Avoid the use of deception.

No deception or covert observation was used in the data collection. A written summary of the research was provided on both visitor and business forms and an oral summary was given before any interview was conducted. Permission to conduct an interview was requested from all respondents and interviewees and all participants were free to refuse to answer all or any question during the interview. Legal permissions to conduct surveys in the LMP Project Area and outside were also granted through Durham University's UNESCO Chair which holds a Memorandum of Understanding with UNESCO and with the Director--General of Archaeology (Nepal) permitting a programme of international and interdisciplinary surveys and excavations within the GLA. Permissions for conducting surveys within the LMP Project Area were specifically requested to the LDT and granted by the Vice Chairman.

While no potential harm to participants was identified for visitor surveys, which were based on large anonymised datasets, possible risks were identified for the other data collection methods, including scoping interviews and surveys of businesses. The main risks identified were related to possible repercussions on participants of giving certain information or expressing views and criticisms of the various stakeholders and organisations involved in the site management. Therefore, the mitigation measures to avoid harm to participants were primarily related to ensuring the anonymity and confidentiality of their contributions beyond the interviewers and other participants' present during the interview or focus group. All scoping interviews with local residents have been anonymised, although some contributions from other key informants, notably LDT officers and representatives from local committees or associations, can be identifiable. In such cases, consenting participants were informed that they are not guaranteed anonymity. They were also informed of the purpose of the study and the mode of dissemination. They were given the opportunity to withdraw or request any information or view that they had expressed to be excluded and/or anonymised in the thesis and any subsequent publications or presentation (Grey 2014: 80). The survey of businesses included sensitive topics related to ownership and commercial activities and therefore confidentiality of the data collected on tourism businesses was a central ethical concern during the study (Bryan and Bell 2011: 129).

The protection of the respondents' privacy and their anonymity was also an important focus to avoid any potential risk to the businesses' commercial activities and to individual participants (Zikmund et al. 2013: 92).

Following recommended data management procedures to guarantee confidentiality and anonymity of participants and avoid the risks identified (Hair et al. 2015: 62), names and contact details have been removed from any published and written work and interview notes and spreadsheets provided in the Appendix. Paper copies have been stored by the researcher and electronic data and information kept on a password protected computer and external hard drive.

As mentioned above, the data collection activities were closely linked with Durham University's UNESCO Chair programme of international and interdisciplinary surveys and excavations within the GLA which involve UNESCO, DoA and LDT, among other partners. Within this research context and with the results of the thesis having possible implications for on-going activities and planning for future development, the result dissemination and reciprocity have also been important ethical considerations. The concept of reciprocity is "*the idea that the research should be of mutual benefit to researcher and participants and that some form of collaboration or active participation should be built into the research project from the outset*" (Bryan and Bell 2011: 141). At its most simple, it requires openness in communicating information about the research and its findings. Dissemination of results to participants thus is an increasing focus of ethical consideration and research in development studies, tourism and heritage (Moscardo 2018; McIntyre-Tamwoy et al. 2015: 84). Therefore, the thesis' approach has been to share results with informants and organisations through Durham's UNESCO Chair project workshops and outputs in the GLA, with illustrative data being anonymised in any public dissemination or future publications. Some of the results have already been disseminated at the International Scientific Committee for the UNESCO/JFIT *Strengthening Conservation and Management at Lumbini World Heritage Site* project's annual meeting in March 2019 which brought together all key stakeholders.

4.5.5. Conclusion

This chapter met Objective 3 of this thesis to develop an analytical framework to for the evaluation of the social and economic impact of the LMP, identify the main evidence gaps and propose a methodology to bridge them. The primary data collection methods developed for this thesis combined sources from a wide range of stakeholders at the site, including visitors, tourism businesses, local residents and key informants from site managers and other local organisations.

Overall, the data collected provided an overview of the current tourism context at the site, but also evidence for quantitative evaluations for key indicators of the framework, and correlations between different variables that affect benefits and impacts on different local communities. The qualitative information, both informed the design of surveys used for the quantitative data collection while also providing further elements to interpret the results and refine the correlation analyses. The results of the data collection are presented and discussed in the following chapter. The thesis' data collection in Lumbini did not intend to meet all the data gaps but to prioritise the data collection to address key unknowns that can be better understood using rapid assessment methods. Other gaps will require additional research and resources and wider managerial changes linking administrative data with site managers' activities to understand the process of change and impact of interventions.

CHAPTER 5: TOWARDS BRIDGING THE GAP. RESULTS FROM PRIMARY DATA COLLECTION IN LUMBINI

5.1. Introduction

The previous chapter identified the current data gaps and indicators for which there are no or limited available, accessible and/or reliable data. The data gap analysis therefore provided an overview of the limits of the current evidence and understanding of the social and economic impact of Lumbini's past and on-going development. Based on the methodology developed to start bridging the data gap, the subsequent objective of this thesis (Objective 4) consists in presenting the results of new primary data collected in Lumbini in 2017-2018.

The following sections present the results from this primary data collection and the additional evidence they provide on the social and economic impact of the LMP. After discussing the results of the visitor and business surveys separately, the last section brings them together along with the secondary data collected and information provided by the scoping and key informant interviews. This last section reviews the evidence based on the selected indicators and sub-indicators identified in the analytical framework to provide an evaluation of the social and economic impact of the site development based on this new evidence. This last section also provides a discussion and interpretation of the implications of these results regarding the social and economic impacts of the heritage site and related tourism and pilgrimage.

5.2. Visitor survey results

5.2.1. Overview of the visitor survey sample

A total of 1,551 forms were completed in the different phases of data collection (see Appendix 16 for descriptive statistics tables and regression tables). Nine surveyors collected the data at five different locations on the visitors' routes with the LMP Project Area over the three phases of data collection (table 5.1). Overall the response rates were high, although questions about visitor spending had the lowest response rate due to visitors often being unsure regarding the amount of money that they spent while in Lumbini or not willing to disclose the information (table 5.2). This was particularly the case for visitors coming as part of an organised tour group who frequently did not know the costs of their stay in Lumbini. Other people, notably those who were interviewed upon their arrival, were uncertain about their plans and expenses locally. For accommodation expenses, the gap was filled whenever possible by asking the name of the hotel/guest house where the group was staying, the cost per room was then estimated based on prices collected in the business survey for each hotel/guest house, based on an average

between highest and lowest prices per room. The number of people in the group and length of stay in Lumbini (per night) were also used to estimate the total cost.

Table 5.1 : Number of respondents (individual or group) by area within the Lumbini Master Plan

Locations	Bus park	Ticket Office	Lumbini Museum	Sacred Garden	Thai Monastery*	TOTAL
Number	173	154	566	402	255	1,551

*The Thai monastery was selected as a location for the survey because it is both one of the most visited monasteries in the monastic zone and one of the monasteries with a guest house for Thai visitors

Table 5.2: Visitor survey response rates per question

Question	Group Type Q2	Gender Q3	Nationality Q4	Age Q5	Religion Q6	Travel Type Q8
Response rate	>99%	>99%	>99%	96%	98%	100%
Question	**Transport Q9**	**Length of Stay Q10**	**Purpose of visit Q11**	**Previous Visit Q12**	**Other sites visited Q13**	**Total Spending Q14**
Response rate	99%	99%	95%	87%	>99%	78%

As has been the case in similar research in the area (Khatri 2018; Boonmeerit 2017; Coningham et al. 2002, 2017), there is a notable gender and age bias among respondents. Young adults and middle-aged men are over-represented, especially among Nepali and Indian respondents. Overall female only respondents represents 15% against 44% of only male respondents. A higher number of groups (40%) have multiple both male and female respondents recorded by surveyors. Certain categories of visitors, like package tours, for instance, who travel in large groups, tend to be under-represented in the sample when the results are analysed per group/respondent. Therefore, whenever possible, the answers of the respondent have been generalised to the rest of the groups with the number of visitors recorded rather than the number of respondents used as the sample to analyse the data between different population groups. Certain responses or questions cannot not be generalised to each individual in the group, including age, gender, and purpose of visits and in these cases, respondents have been used as sample. Each table or figure specifies which sample 'number of visitors' or 'number of groups/respondents' has been used.

A total of 803 domestic, 297 Indian and 447 third country groups from 40 different countries were interviewed, representing respectively 6,574, 2,759 and 5,039 visitors for a total of 14,405. While January still has fairly low visitor numbers, February and March is a period that attracts a diversity of visitors from Nepal but also particularly from South Asia while other foreigners are also all well represented (Figure 5.1-5.2). Therefore, all the main foreign visitors on site are well represented in the survey, including from Myanmar, Thailand and Sri Lanka. The language barrier has been, however, a challenge with some of the South East and East Asian groups who neither spoke English, Nepali or Hindi, the main languages spoken by the surveyors.

Figure 5.1 : Monthly foreign visitor numbers in Lumbini Sacred Garden in 2016 (Source: LDT 2017)

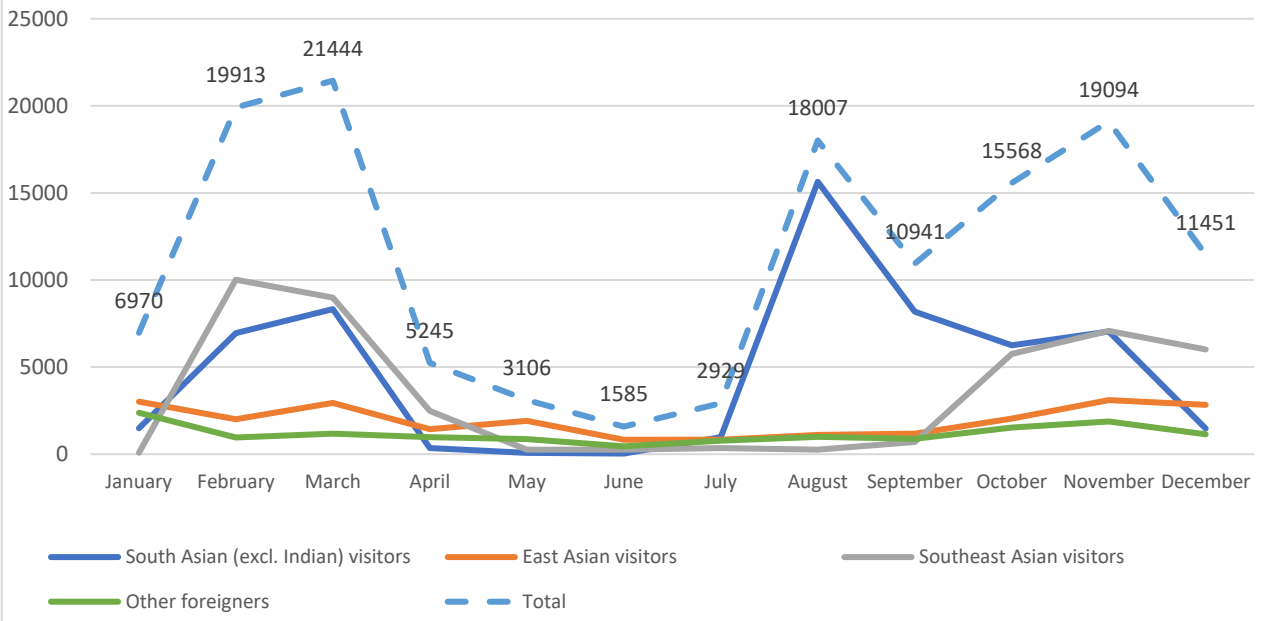
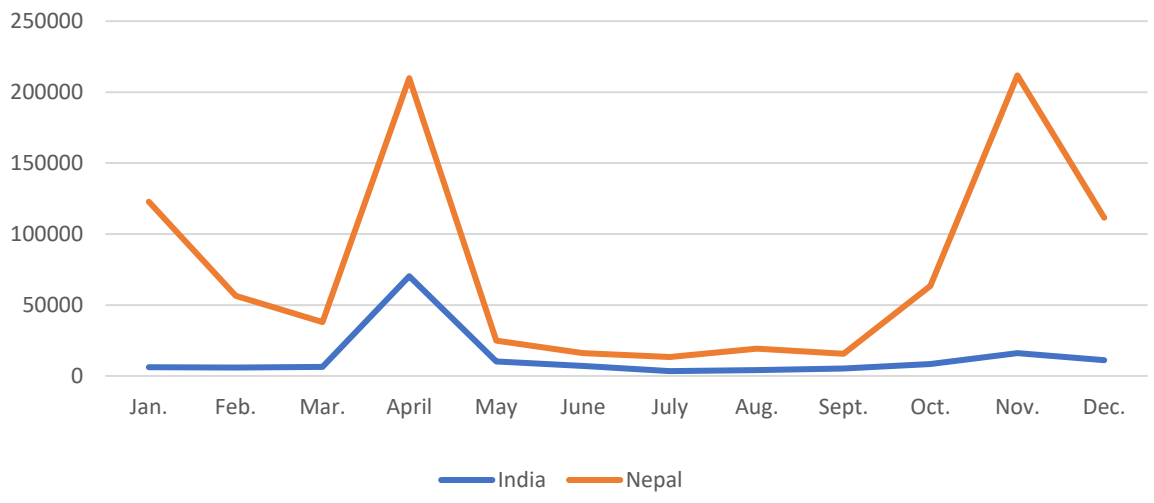


Figure 5.2 : Estimated numbers of Nepali and Indian visitors per month in 2016 (Source: LDT)



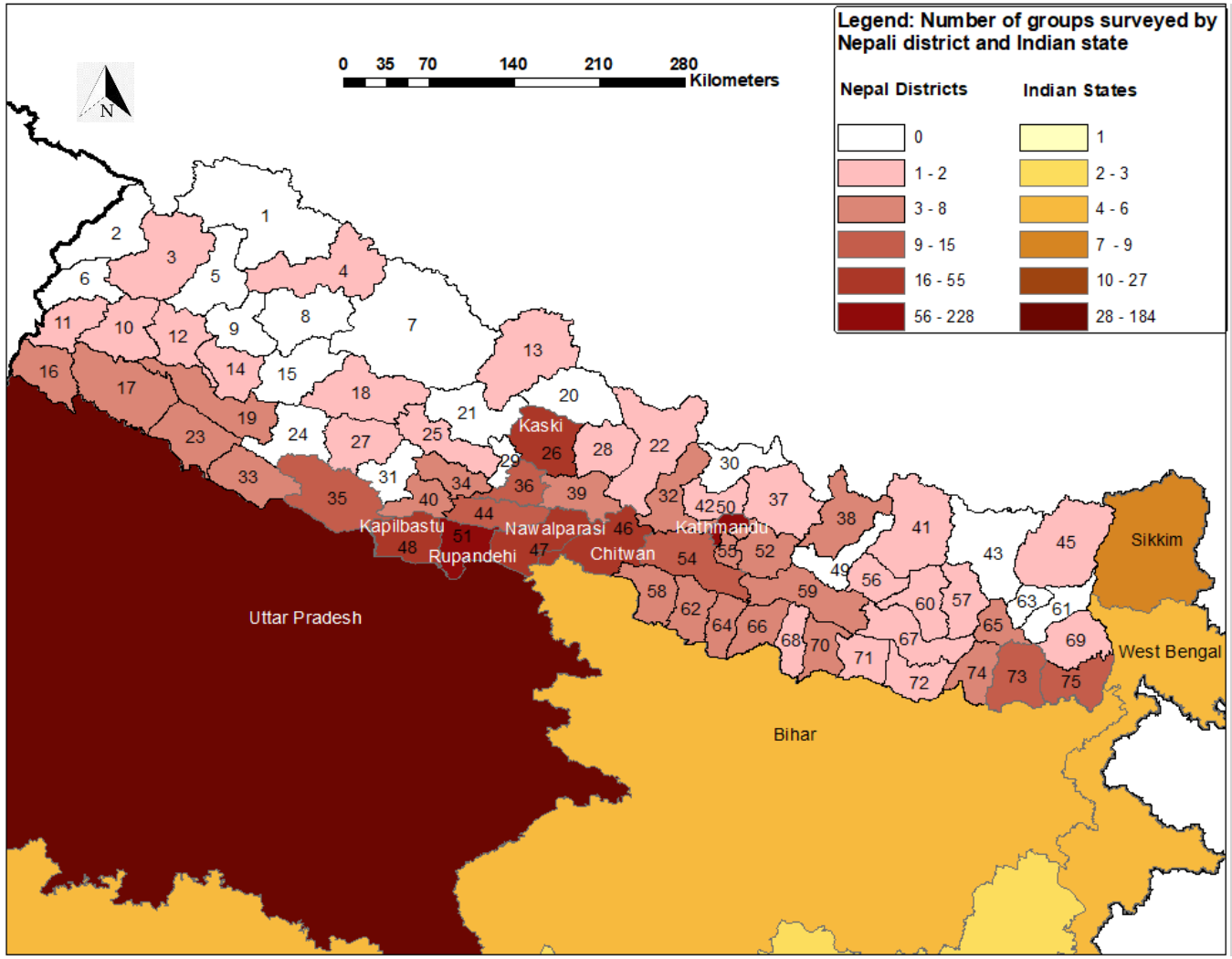
This survey was also the opportunity to better understand domestic and neighbouring visitors from India and therefore information has been collected regarding the Nepali district or the Indian state of residence of these two groups. The distribution of the visitor groups has then been mapped more specifically based on their area of residence.

5.2.2. Characteristics of pilgrimage and tourism activities in Lumbini

The first objective of the visitor survey was to provide additional information regarding the visitors and their activities in Lumbini, including the purpose of their visit, their religion but also their activities in and around the site, their length of stay and their route within the GLA. Most of the groups interviewed came as a family (37%) and/or with friends (32%). However, as tour groups tend to be much larger than family or friend groups, in actual individual visitor numbers, the former represent a much higher proportion than the latter groups. Overall, organised tour groups account for 43% of individual visitors (but only 10% of groups) recorded in the survey and over 50% when excluding the sample from the museum where few of package tours go. These results suggest that tourism and pilgrimage in Lumbini is currently dominated by organised tour groups rather than independent visitors.

A significant number of respondents are from the immediate surroundings of Lumbini and the transborder region. Border crossing is indeed favoured by the open border between Indian and Nepal which allows Indian and Nepali visitors to cross freely without having to go through any border control. Visitors from within the GLA and visitors from the border states of Bihar and Uttar Pradesh (India) represent respectively 13% and 9% of all visitors recorded during the survey. Figure 5.3. represents the origin of domestic and proximity visitors by Nepali district and bordering Indian states. These proximity visitors may therefore have different characteristics and travel practices when they visit Lumbini compared to other visitors coming from further away. They are therefore considered separately from other Nepali and Indian visitors in the comparative analysis. Overall, the results are compared between eight categories of visitors, including Nepali (excl. GLA), Indian (excl. Bihar and Uttar Pradesh), GLA visitors, Bihar/Uttar Pradesh (BR/UP) visitors, other South Asian, South East Asian, East Asian visitors and Other Foreign Visitors, primarily from Western countries.

The results from the survey indicate that these different groups have different characteristics and practices while in Lumbini. Most South and South East Asian visitors travel in organised tour groups primarily for religious reasons and pilgrimage. East Asian and 'Other Foreign' visitors are more split with just over 75% East Asian visitors coming as part of a package tour, compared with only 40% of other foreign travellers (Table 5.3). By contrast, domestic and Indian visitors



List of Nepali districts			
1	Humla	39	Tanahun
2	Darchula	40	Arghakhanchi
3	Bhajang	41	Solukhumbu
4	Mugu	42	Nuwakot
5	Bajura	43	Sankhuwasabha
6	Baitadi	44	Palpa
7	Dolpa	45	Taplejung
8	Jumla	46	Chitwan
9	Kalikot	47	Nawalparasi
10	Doti	48	Kapilbastu
11	Dadeldhura	49	Ramechhap
12	Assam	50	Kathmandu
13	Mustang	51	Rupandehi
14	Dailekh	52	Kavrepalanchok
15	Jajarkot	53	Bhaktapur
16	Kanchanpur	54	Makwanpur
17	Kailali	55	Lalitpur
18	Rukum	56	Okhaldhunga
19	Surkhet	57	Bhojpur
20	Manang	58	Parsa
21	Myagdi	59	Sindhuli
22	Gorkha	60	Khotang
23	Bardiya	61	Panchtharh
24	Salyan	62	Bara
25	Baglung	63	Tehrathum
26	Kaski	64	Rautahat
27	Rolpa	65	Dhankuta
28	Lamjung	66	Sarlahi
29	Parbat	67	Udayapur
30	Rasuwa	68	Mahottari
31	Pyuthan	69	Ilam
32	Dhading	70	Dhanusa
33	Banke	71	Siraha
34	Gulmi	72	Saptari
35	Dang	73	Morang
36	Syangja	74	Sunsari
37	Sindhupalchok	75	Jhapa
38	Dolakha		

Figure 5.3 : Origin of domestic and proximity visitors in Lumbini
(based on visitor survey results)

Table 5.3 : Type of travellers, by nationality and area of residence

(based on a sample of 14,405 visitors recorded from 1551 groups)

Type of travellers	Nepal (excl. GLA)	Nepal (GLA only)	India (excl. BR and UP only)	India (BR and UP only)	Other South Asia	South East Asia	East Asia	Other Foreign	Unsp	TOTAL
Package tour	1,291	78	554	200	1,034	2,174	688	247	0	6,266
Independent	3,169	1,816	747	1,258	206	93	221	371	33	7,914
Unspecified	70	150	0	0	3	0	2	0	0	225
TOTAL	4,530	2,044	1,301	1,458	1,243	2,267	911	618	33	14,405

are mainly independent visitors with around 75% travelling independently, with families and friends.

The responses also indicate a diversity of purpose for visiting Lumbini. The main purposes of visit are religion/pilgrimage and heritage, but these two categories are often not exclusive, and many individuals and groups identify both as their purpose of visit (Figure 5.4). A comparison of the 'heritage' and 'religion/pilgrimage' responses by nationality and area of residence of respondents indicates that more Nepali and Indian visitors mention heritage than religion/pilgrimage (Figure 5.5). This result is particularly striking among groups from the surrounding region, including the GLA and the Indian states of Bihar and Uttar Pradesh. By contrast, other South, South East and East Asian visitors in Lumbini come primarily for religious and pilgrimage purposes while other foreign visitors have more diverse purposes of visits with heritage and religion both accounting for less than 50%, while nature and culture are frequently listed as being of interest to the latter group of visitors.

These differences between the different categories of visitors can be linked to religious backgrounds. Domestic and Indian visitors tend to be in large majority Hindu, with fewer Buddhist groups. Foreign visitors are primarily Buddhists, with a small minority of non-religious visitors included within the 'Other' (8%) and Christian visitors. While there is a large Muslim community in Lumbini (accounting for about one third of the population), in the GLA and the border states of North India (Table 5.4-5.5) they only represent 2% of the total visitors interviewed and only 4% of local visitors. These figures suggest that the surrounding Muslim communities have weaker socio-cultural ties with the heritage site than other communities who visit the LMP Project Area either for heritage, leisure or religious purposes. The business survey which will be presented in more detail in the following section also indicates that Lumbini Muslim communities have weak economic ties with the site and are only marginally involved in the municipal tourism and pilgrimage sector.

Figure 5.4: Proportion of respondents identifying 'heritage' and/or 'religion/pilgrimage' as purpose of visit by nationality and residence
(based on a sample of 1547 groups)

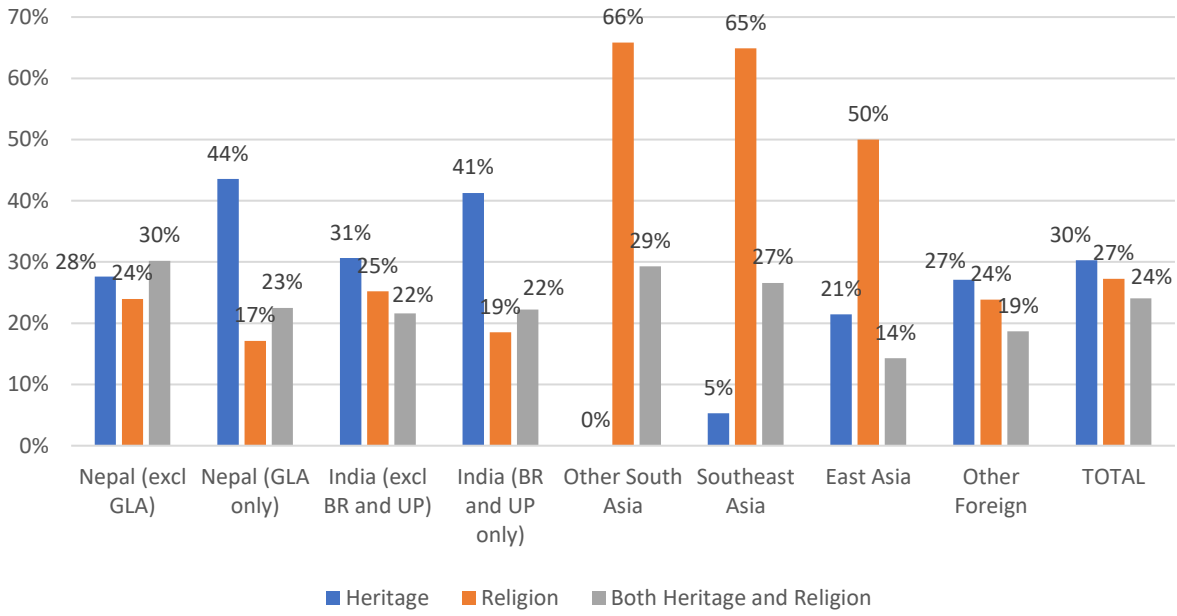


Figure 5.5：Purpose of visit of visitors in Lumbini
(based on a sample of 1551 respondents)

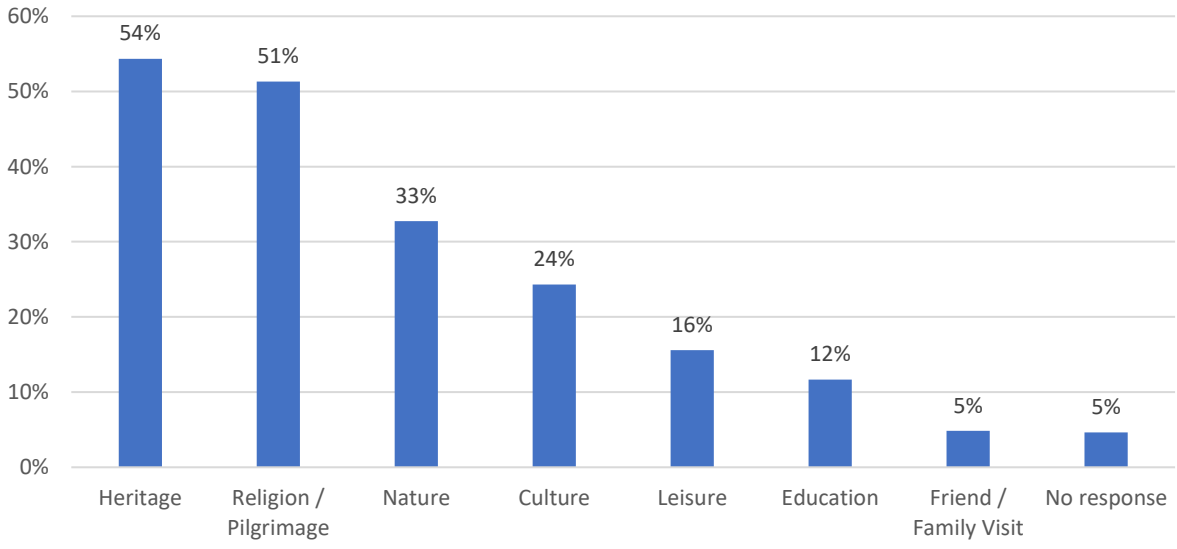


Table 5.4 : Religion of visitors recorded in the survey
(based on a sample of 14214 visitors from 1516 groups)

	Nepal (excl GLA)	Nepal (GLA only)	India (BR and UP only)	India (excl BR and UP)	Other South Asia	South East Asia	East Asia	Other Foreigners	Unsp	TOTAL
Hindu	72%	84%	73%	57%	2%	0%	0%	0%	25%	53%
Buddhist	13%	2%	6%	23%	93%	97%	72%	25%	25%	23%
Hindu/Buddhist	7%	4%	3%	6%	0%	0%	2%	0%	0%	4%
Christian	1%	1%	1%	1%	2%	1%	3%	25%	25%	5%
Muslim	1%	2%	7%	2%	2%	2%	0%	0%	0%	2%
Other	1%	1%	0%	4%	0%	0%	17%	43%	0%	8%
Mix/ Unspecified	5%	8%	10%	8%	0%	0%	5%	8%	25%	5%

Table 5.5 : Population in Lumbini and within the transborder region by religion

	Lumbini	GLA	Bihar	Uttar Pradesh
Hindu	67.25%	85%	83%	80%
Muslim	32.5%	10%	17%	19%
Buddhist	0.1%	4%	0.02%	0.1%
Other	0.15%	1%	0.3%	0.9%

Sources: Nepal Population Census 2011; India Population Census 2011

A majority of visitors to Lumbini are day-trippers, with only 36% of respondents staying overnight (Figure 5.6). As expected, the visitors from the GLA and BR/UP tend to come for a day trip, usually staying for a full day or half-a-day. However, this practice is also visible among other Nepali visitors with only 20% staying overnight. Many long-distance Indian visitors in Lumbini also seem to spend the night in India, rather than stay in Lumbini. By contrast, most foreign visitors stay at least one night locally, especially 'Other Foreigners' with 88% staying at least one night. The latter group are also the visitors staying longer, with nearly 50% of them spending two nights or more in Lumbini (Figure 5.7). Most South East Asian visitors (78%) stay one night only, with 16% spending two nights but only 3% staying longer. Based on informal discussions with tour leaders and interviews in the Monastic Zone, their package tours tend to be fairly similar, including the Indian sites on the other side of the border, a visit of Lumbini with one or two nights stay, depending on their initial arrival time, and a visit to Tilaurakot-Kapilavastu (either before or after Lumbini), followed by a return back to India. The foreign visitor groups who do not stay overnight tend to stay half-a-day and cross the border to India or go up to Kathmandu. A small number among them comes for meditation courses provided by the two Vipassana meditation centres within the Lumbini Master Plan Area. The information from one

Figure 5.6 : Length of stay of Lumbini visitors by nationality/area of residence

(based on a sample of 1528 respondents, representing 14258 visitors)

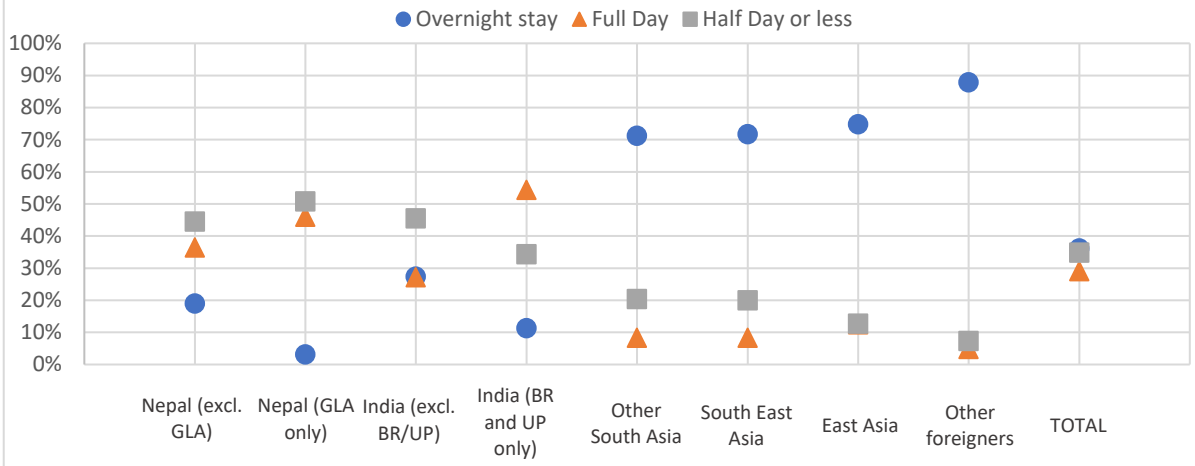
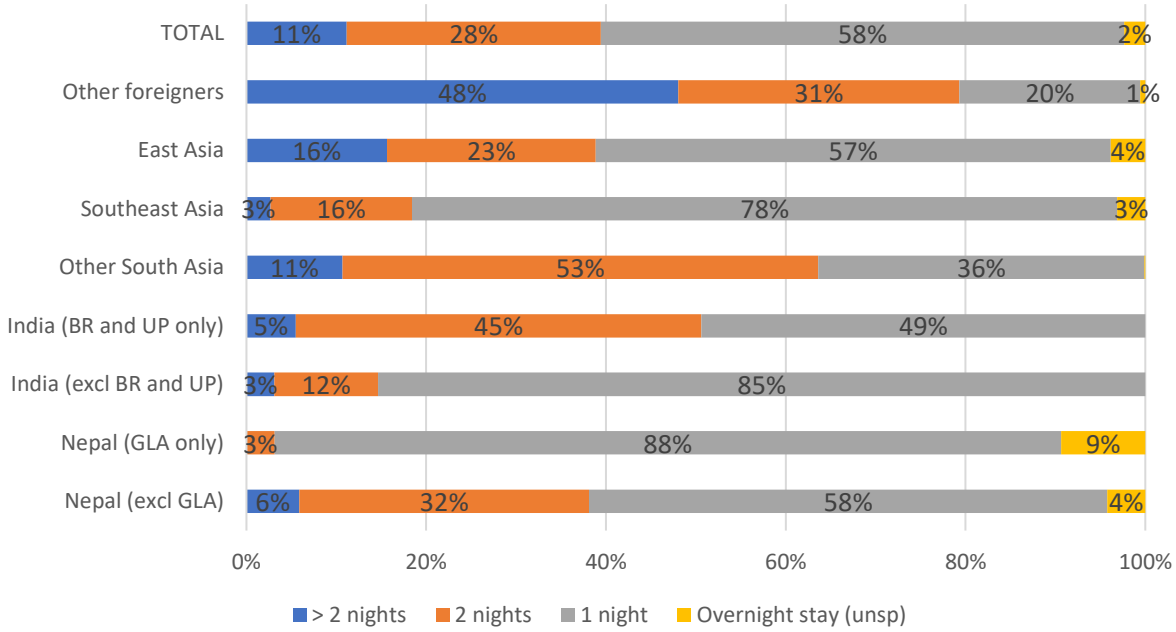


Figure 5.7 : Number of nights spent in Lumbini for overnight visitors by nationality/area of residence

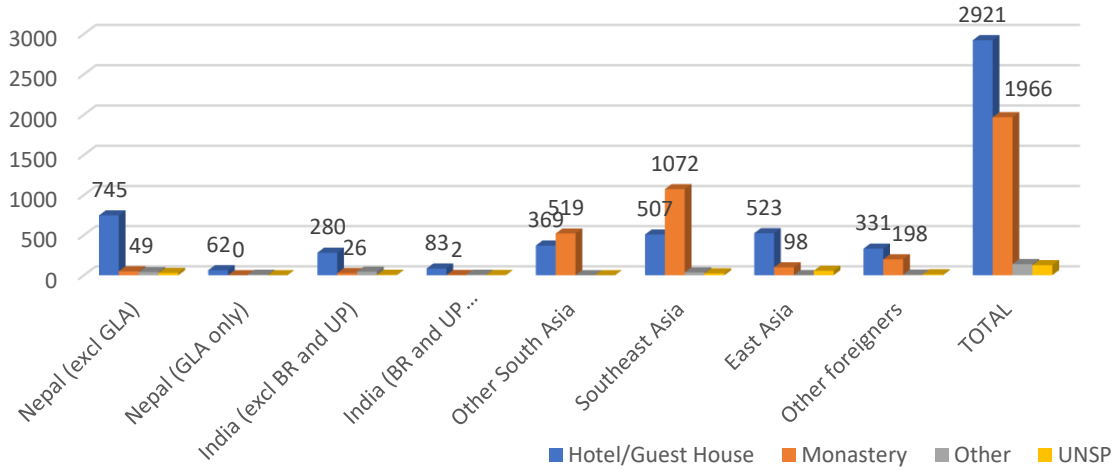
(based on a sample 5164 visitors from 547 groups)



of these centres (the Panditarama Vipassana Meditation Centre) indeed indicates that their 'yogis' are from diverse nationalities, primarily outside the main South, South East and East Asian countries, and Western visitors are highly represented along with Nepali visitors (Appendix 17). Participants to the retreats tend to stay between seven days and one month but be low spending locally. Most visitors staying overnight stay in hotels/guest houses but 38% of respondents stayed in monasteries located in the Lumbini Master Plan (Figure 5.8).

The comparison based on the nationality of visitors indicates that the proportion of visitors staying in monasteries is particularly high among South East and other South Asian visitors, primarily Sri Lankan groups. The Royal Thai Monastery and the Myanmar monastery have large guest houses to accommodate their national visitors while Sri Lankan visitors can stay at the Sri Lankan pilgrim rest-house in the Cultural Zone, at the Sri Lankan monastery or more occasionally at the Mahabodhi Society monastery (although the latter does not have any official guest houses). The Mahabodhi Society monastery also coordinates the visit of some of the larger Sri Lankan pilgrim groups in Lumbini. Over one third of other foreigners also choose to stay in a monastery rather than a local hotel or guest house. By contrast, East Asian, Nepali and Indian visitors overwhelmingly stay in hotels and guest houses. Beyond the practices of domestic and proximity visitors who do not often stay overnight, the main leakage for the tourism industry in Lumbini Municipality is therefore the high proportion of foreign visitors staying in monasteries inside the LMP Project Area. Religious package tours are the main users of the guest houses, with pilgrims staying overnight in the monastery from their home country, notably Thailand, Myanmar, China. There appears to be currently a win-win situation for all stakeholders, excluding local hotel owners: pilgrims get to stay in a familiar setting, experience first-hand spiritual life in the monastery, thus enhancing their pilgrimage experience, while monasteries receive donations on which they are dependent and tour operators save on accommodation charges.

Figure 5.8 : Types of accommodation in Lumbini by nationality/area of residence (by number of visitors recorded)
(based on a sample of 531 groups, representing 5150 visitors)



The visitors to Lumbini tend to follow two different routes. Nearly all Indian visitors and South East Asian visitors come from and/or return to India, with a small minority (11% for both groups)

also travelling to Kathmandu. By contrast non-local Nepali visitors (excl. GLA) and 'Other Foreign' visitors tend to remain within Nepal without crossing the Indian border. Only 3% of non-local Nepali visitors and 24% of 'Other Foreigners' cross the border while over one third of non-local Nepali visitors go to Kathmandu and 85% of 'Other Foreigners'. Many of them visit other tourist attractions in the Western Tarai including Chitwan National Park World Heritage Site which is not the case for Indian and South East Asian visitors. Groups from East or other South Asian countries have more diverse practices, with more East-West travels. Although they are still over 50% to travel across the border to India, one quarter visit Chitwan National Park and half of East Asian visitors travel to Kathmandu, either on the way to Lumbini or on their way back from India and Lumbini. It suggests that there is a niche of visitors in Lumbini that visits as part of the 'Nepal destination' but that the majority of visitors comes as part of the Buddhist pilgrimage circuit centred primarily around Indian sites with Nepali archaeological sites being on the periphery. This was a possibility already mentioned by the UN tourism expert Alkjaer (1968: 27-8) who emphasized the importance of integrating Lumbini within the national tourism offer for the project to avoid leakages and maximise economic benefits.

Most visitors, however, do not visit any other sites in the GLA, with only 20% going to at least one other local archaeological site. Indian and 'Other Foreign' visitors are particularly few to visit any other local site while one third of South East Asian and just under one quarter of East Asian visitors visit at least one other site in the GLA. Among the visitors who visit other archaeological sites, 92% go to Tilaurakot-Kapilavastu, 46% to Kudan, 35% to Niglihawa and less than one quarter visit other sites such as Ramagrama and Gotihawa. Among these groups, South East Asian visitors have clear, defined routes which include Tilaurakot-Kapilavastu and Kudan, both having temples affiliated to the Lumbini Royal Thai monastery, and to a lesser extent Niglihawa and Gotihawa. The stupa in Ramagrama is visited primarily by East Asian and 'Other Foreign' groups (with over one third of these visitors going to the stupa), followed by South East Asian groups. Other sites like Devadaha or Araurakot are primarily visited by domestic and Indian visitors.

5.2.3. Visitor spending and the economic impact of visitors

The visitor surveys also collected data on visitor spending, including total spending but also their spending on accommodation, transportation, food/drink, souvenirs/gifts, tour guide, entrance fee and any other expenditures that they made locally. The data was collected for each group and was then averaged per person per group for each category to avoid large disparities between small and large groups. Nearly all groups surveyed spent some money locally as part

of their visit. Less than 1% had no expenses (Figure 5.10). Over three quarters spent on food/drink, over half spent on transportation and over one third on souvenirs and gifts (Figure 5.9).

Figure 5.9 : Visitor expenditure breakdown in Lumbini by spending category (mean per person per group)
(based on 1183 respondents)

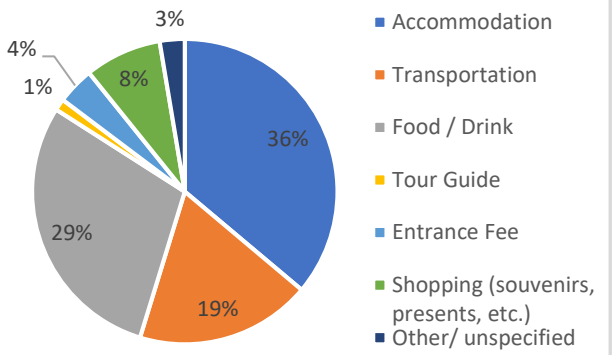
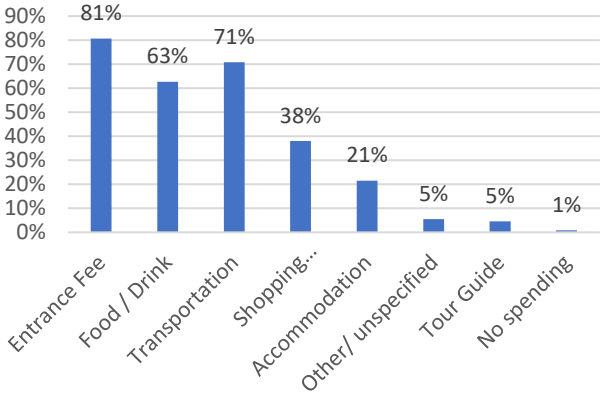


Figure 5.10 : Proportion of groups that have declared expenses by types of spending (in %)*
(based on 1183 respondents)



*The proportion of visitors paying an entrance fee is affected by the museum sample as Nepali visitors do not pay a fee to visit the Sacred Garden of Lumbini but they have to pay a ticket for the museum where a large proportion of interviews were conducted. When excluding the museum sample the proportion drops to 59% of respondents.

Based on the survey responses, the average spending per person per group is 2,068 NPR or 19 USD (see the conversion rate in Table 5.6). A comparison with the information and data from previous research and reports discussed in Section 3.4.2 already points out significant differences between the former and the thesis' findings, in terms of average spending of overnight and day-trip visitors by nationality. Table 5.7 provides the results of the survey for total spending which can be compared with the reports' estimates in USD (Table 3.4). While the average figure of 37 USD spent by overnight visitors is close to the thesis' findings, there is a major difference for day-trippers who form the majority of visitors in Lumbini. The figure provided for the latter in previous reports is an average spending of 26 USD which is nearly three times over the average total spending of 9 USD spent by day-trippers in Lumbini based on the thesis' survey results. Among day-trippers, the difference is particularly significant for Indian visitors, with the results of thesis' visitor survey suggesting a total spending five times lower than was estimated. As discussed in the previous section (5.2.2), a large number of Indian visitors are proximity visitors from across the border and therefore may not have significantly different spending patterns from the domestic visitors.

Table 5.6 : Visitor spending based on average per person per group (in NPR*)**

	Accom.	Transport.	Food / Drink	Tour Guide	Entrance Fee	Shopping (souvenir, present, etc.)	Other/ unspecified	Total
Total Sample Mean (incl 0)	601	310	487	20	65	136	44	2,045
Total Sample Mean (excl. 0)* **	2,618	548	624	705	89	349	943	2,068
Median	1,111	300	294	250	32	200	236	780
Number of entries	319	725	806	31	1,129	400	54	1,141
Standard deviation	6,295	785	1,084	1,304	116	560	8,956	5,449
Standard error	352	29	38	234	3	28	1,219	161

*1USD = 108 NPR at the time of survey
** all results above unless specified excludes no responses and 0/'no spending' responses
*** the average spending on accommodation is higher than the total average due to the mean for accommodation being calculated only on the sample of respondents staying overnight, a minority of visitors (36%) who also tended to spend more than the average visitor in Lumbini

Table 5.7: Mean total spending of overnight and day-trip visitors in Lumbini, by nationality

Categories of visitors	Domestic	India	Third Country	Total Sample
Overnight Visitors Mean Spending (NPR)	2,518	2,810	4,809	4,029
Overnight Visitors Mean Spending (USD)	23	26	45	37
Day-trippers Mean Spending (NPR)	803	503	3,919	1,017
Day-trippers Mean Spending (USD)	7	5	36	9

As suggested by the comparison in Table 5.6, there are significant disparities in the mean spending of visitors in Lumbini. While the average spending is just over 19 USD, the median is 7 USD, or 780 NPR, with half of the respondents spending less than the latter amount. This large difference between the average and the median immediately indicates that there are large disparities in per person spending between the different groups visiting Lumbini with a high number of groups spending very little and very few groups spending larger sums per person. The following analysis therefore focuses on identifying the factors that impact visitor spending in Lumbini, including overall expenses but also for specific spending categories.

The first main variable examined is nationality and area of residence for more local visitors. Unsurprisingly, proximity visitors from the GLA and BR/UP are the groups who have the lowest spending per person. Most of them do not spend a night outside their home, come with their own vehicle and have little to eat or drink at the site. On average, the highest spending groups are the 'Other Foreigner' category and East Asian, followed by South East Asian visitors (Table 5.8; see Appendix 15.3 for regression table). The ordinal logistic regression was conducted for three categories, Nepal/India, other Asian and Non-Asian visitors and controlled for other factors, including length of stay. The results suggest that there is a higher probability for non-

Table 5.8 : Average visitor spending (in NPR) by nationality/ residence

	Accom.	Transport.	Food/ Drink	Tour Guide	Entrance Fee	Shopping (souvenir gift, etc.)	Other/ unspecified	Total
Total Sample	601	310	487	20	65	136	44	2,045
Other Foreigners	2,591	429	1,144	43	203	220	182	5,648
East Asia	2,087	381	719	34	187	182	20	4,013
South East Asia	1,241	170	516	76	191	106	1	3,240
Other South Asia	706	182	342	20	93	136	0	1,446
India (excl BR/UP)	349	320	334	70	28	142	51	1,505
Nepal (excl GLA)	148	404	465	0	13	126	20	1,549
India (BR/UP only)	26	197	206	1	23	87	8	703
Nepal (GLA only)	11	212	190	0	12	107	10	572

Asian groups to spend more in Lumbini than Nepali and Indian groups (Table 5.9). The odds-ratio suggests that the probability is indeed two times higher for the former. However, the results for other Asian visitors are not statistically significant, the p-value being above the threshold of 0.05. Therefore, it is not possible to confirm whether the variations in the average observed in the cross- tabulation is related to visitor nationality in this case or to other factors.

Based on the results of the ordinal logistic regression, the length of stay, especially with overnight stays, is the main predictor of spending. The regression coefficients are significantly higher for increasing lengths of stay than any other predictors, including nationality. Based on the odds-ratio, the probability of groups spending more in Lumbini already increases by 3.1 if they stay for one full day compared to only half-a-day or less. However, the ratio is much higher if they stay overnight, with a probability 12.5 times higher if they spend one night and 23.6 times higher if they stay longer (Figure 5.11). These results strongly indicate that the longer visitors stay the more likely they are to spend more in total in Lumbini. While the regression was not applied by types of expenses, the cross-tabulation breakdown also suggests that the increase in visitor spending tends to affect all expenses, including accommodation and food/drinks but also souvenirs and gifts, hiring local tour guides, and transportation (Figure 5.12).

Table 5.9 : Ordinal logistic regression Model 1: Determinants of total spending

V17_Total Spending (n = 848)	Coefficient	Std. Err.	P-Value	[95% Conf. Interval]	
V1_Type of Group					
Family/friends	-	-	-	-	-
***Single Couple**	**.8080308**	**.2007939**	**0.000**	**.4144819**	**1.20158**
***Organised tour groups**	**-1.778446**	**.4042189**	**0.000**	**-2.570701**	**-.986192**
V3_Nationality					
Nepal/India	-	-	-	-	-
Other Asian	.5375656	.3092435	0.082	-.0685406	1.143672
***Other Foreigners**	**.7469373**	**.3629227**	**0.040**	**.0356219**	**1.458253**
V6_Religion					
Buddhist	-	-	-	-	-
Hindu	.1262625	.2422441	0.602	-.3485273	.6010522
Christian	.0475287	.3322177	0.886	-.603606	.6986634
Muslim	-.5326058	.500394	0.287	-1.51336	.4481484
V7_Purpose of visit					
Pilgrimage	-.291256	.191515	0.128	-.6666186	.0841066
V8_Travel Organisation					
***Package tours**	**.7439148**	**.3352556**	**0.026**	**.0868258**	**1.401004**
V10_Length of stay					
Half-a-day	-	-	-	-	-
***One day**	**1.099551**	**.17185**	**0.000**	**.7627313**	**1.436371**
***One night**	**2.531148**	**.2372149**	**0.000**	**2.066215**	**2.99608**
*** > One night**	**3.179974**	**.288951**	**0.000**	**2.61364**	**3.746307**
V12_Site Visited					
***Other sites**	**.7932581**	**.1537662**	**0.000**	**.4918819**	**1.094634**

*NB: asterisks have been used to highlight the level of statistical significance of the results: ** signifies high level of statistical significance with a p-value < 0.01; and * signifies statistically significant results, with p-value < 0.05*

Length of stay being such a central factor in visitor spending, ordinal logistic regressions have been performed to identify some of the variables that impact on the length of stay of visitors in Lumbini (Figure 5.13). The results indicate that nationality is an important predictor for length of stay. The probabilities for other Asian and non-Asian visitors to stay longer than Nepali and Indian visitors, based on odds-ratios, are respectively 5.4 and 16.6 higher. Other ordinal logistic regressions have been performed separately for the three nationality categories to understand possible factors impacting their length of stay. While the statistical tests indicate that the results are not statistically significant for Asian and non-Asian visitors, the analysis for Nepali/Indian visitors provide conclusive results. The regression coefficient and odds-ratio suggest that a key predictor for length of stay is whether they visit other sites locally and in Nepal. Figure 5.14 compares local groups' length of stay between groups visiting no other sites in Nepal and groups

Figure 5.11 : Predictors of total spending in Lumbini
(based on 848 observations)

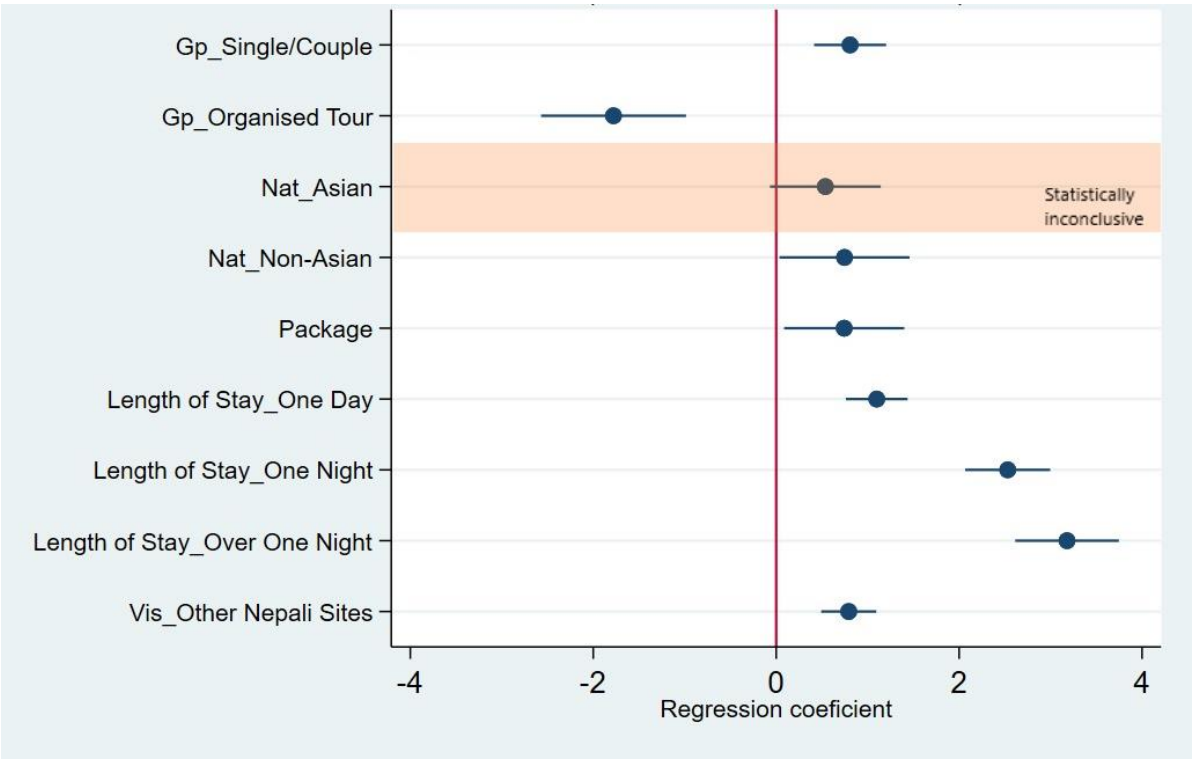
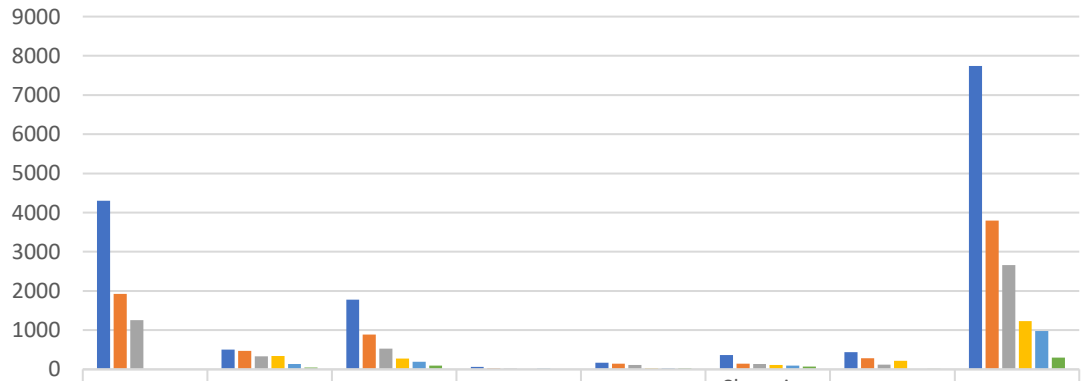


Figure 5.12 : Mean Visitor Spending (in NPR) by length of stay



	Accom.	Transp	Food/ Drink	Tour Guide	Entrance Fee	Shopping (souvenirs, presents, etc.)	Other/ unspecified	Total
More than 2 nights	4304	504	1780	61	169	365	436	7741
2 nights	1927	470	885	33	143	149	284	3798
1 night	1253	334	525	26	113	133	119	2657
Full day	0	344	276	4	29	110	221	1231
Half-a-day	0	138	191	25	28	97	10	977
Less than 2 hours	0	43	92	0	28	73	13	297

Figure 5.13 : Predictors of length of stay of Lumbini visitors
(based on 1108 observations)

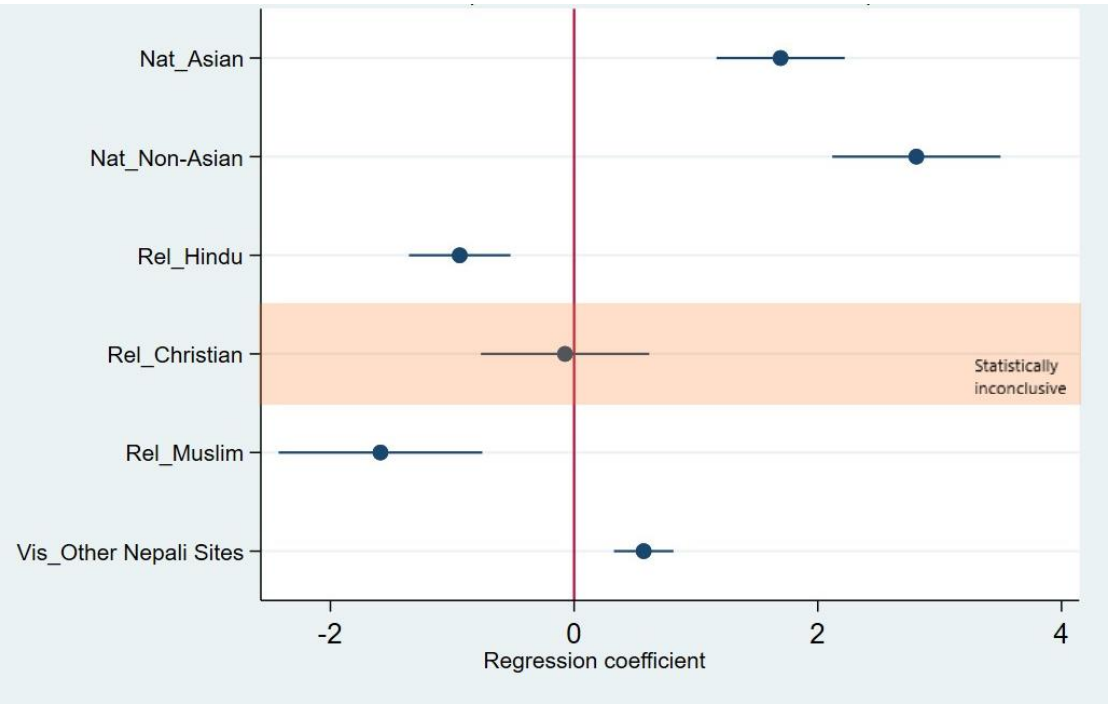
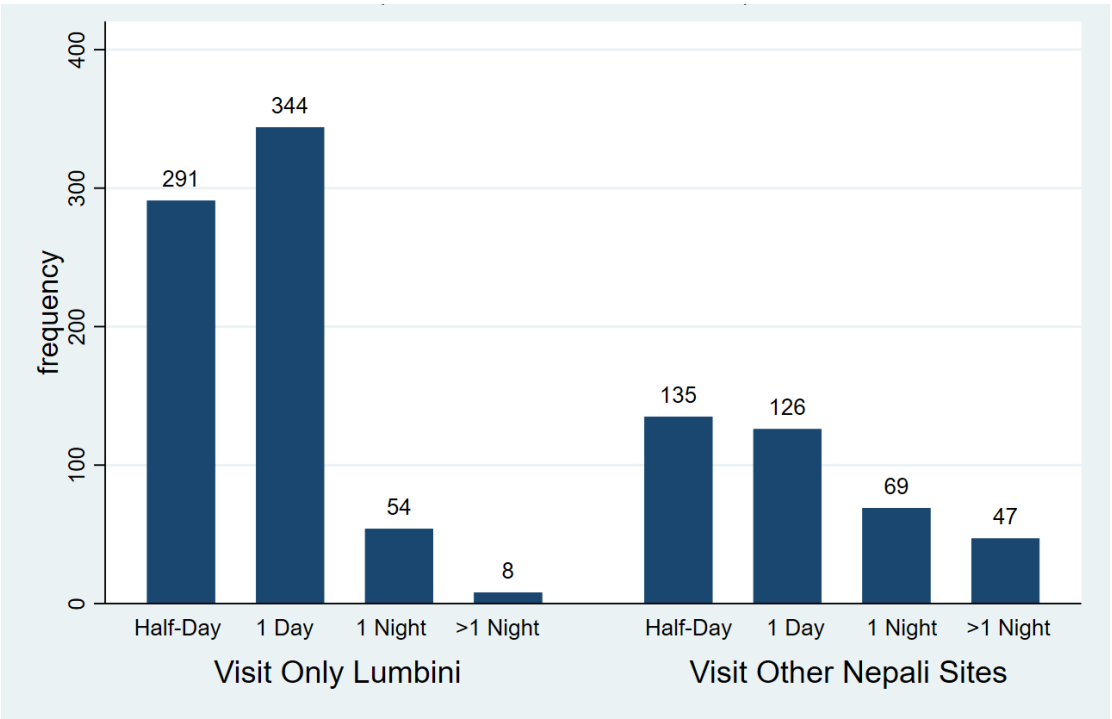


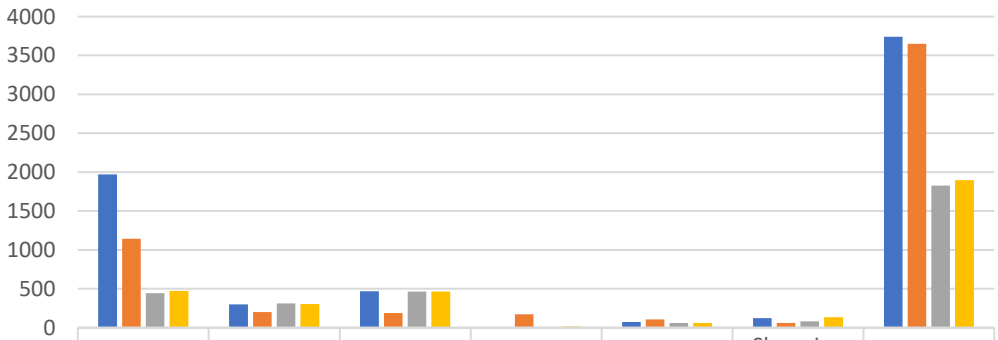
Figure 5.14 : Local visitors' length of stay by number of sites visited
(based on 1074 observations)



visiting at least one. For the former, the responses are clearly skewed towards shorter stays while for the latter a higher proportion tend to stay longer. While these results are limited to the Nepali/Indian visitor category, the latter represents the large majority of visitors in Lumbini at present. The results thus indicate that promoting local sites within the GLA but also reinforcing the links between Lumbini and other sites in Nepal is an important factor to increase the length of stay of visitors in Lumbini and subsequently their total spending. Considering the clear link between length of stay and visitor spending, collecting more data from other visitor groups could provide more details on other factors influencing the length of stay of international visitors.

In addition to the observed link between length of stay in Lumbini and visits to other sites in Nepal, the latter also appears as an important predictor of overall spending. The regression coefficient is higher for the latter than for nationality (Table 5.9). However, the cross-tabulation between the numbers of other sites visited and mean spending provided different insights in the relation between visitor spending and site visits (Figure 5.15). Groups visiting only one other site are on average spending marginally less per person than groups only visiting Lumbini, in nearly all categories, including accommodation, transportation, souvenirs, and overall spending. Visitors going to more than one other site have overall higher total expenditures, with an especially large disparity in accommodation cost between groups visiting one other site and groups visiting at least two other sites in the GLA, from an average of below 500NPR for the

Figure 5.15 : Mean visitor spending (in NPR) by number of sites visited in the GLA



	Accom.	Transport.	Food/ Drink	Tour Guide	Entrance Fee	Shopping (souvenirs, presents, etc.)	Total
>2 sites	1972	298	470	3	74	121	3742
2 sites	1144	200	187	173	107	62	3652
1 site	444	313	466	6	62	82	1828
No other local site	474	306	466	18	63	135	1897

former to over 1,000NPR and nearly 2,000 NPR for groups visiting more than two sites. It suggests that groups visiting two sites or more tend to stay longer and therefore have higher accommodation costs in Lumbini. The visit to another site in the area besides Lumbini therefore does not necessarily guarantee that people will spend more on accommodation and food/drink and souvenirs if the site visits are organised one after the other with a very short stay at each site. This is notably the case for the increasing number of organised tours going to Tilaurakot-Kapilavastu where they spend on average less than one hour to then head to Lumbini or to the Indian border.

The breakdown based on the mean spending per category initially suggests that overall package tours spend slightly more than independent visitors, with a difference of 250 NPR (Figure 5.16). The ordinal logistic regression used to characterise the determinants of visitor spending also indicate that, overall, package tour groups are more likely to spend more in Lumbini, even when controlled for other factors, including nationality and length of stay (Figure 5.17). The odds-ratio suggests that the probability of package tour groups spending more in total was 2.1 times higher than independent travellers. These results confirm a link between the type of trip organisation and total visitor spending, but not the one that was initially expected, as independent travellers tend to be regarded as higher spending visitors locally than package tours. The ordinal logistic regression that has been conducted to identify more specifically determinants for types of expenses rather than total spending provided outcomes which provide another insight on these results. While the package tours have a higher probability of spending more on accommodation, the probabilities of spending more on the other expenses, including food/drink, transportation and souvenir/shopping are either lower than independent groups or, in the case of

Figure 5.16 : Mean visitor spending (in NPR) by independent and package tour groups

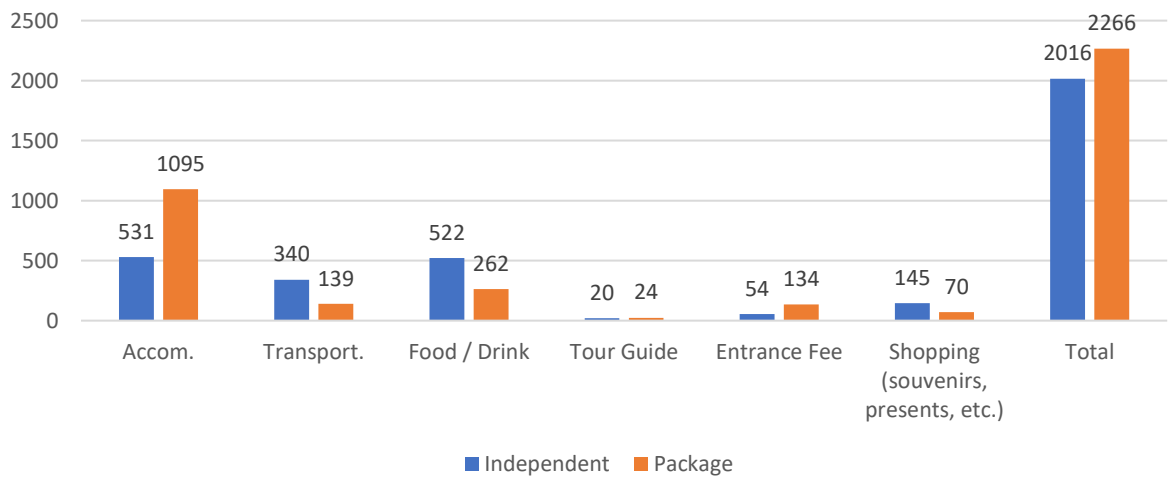
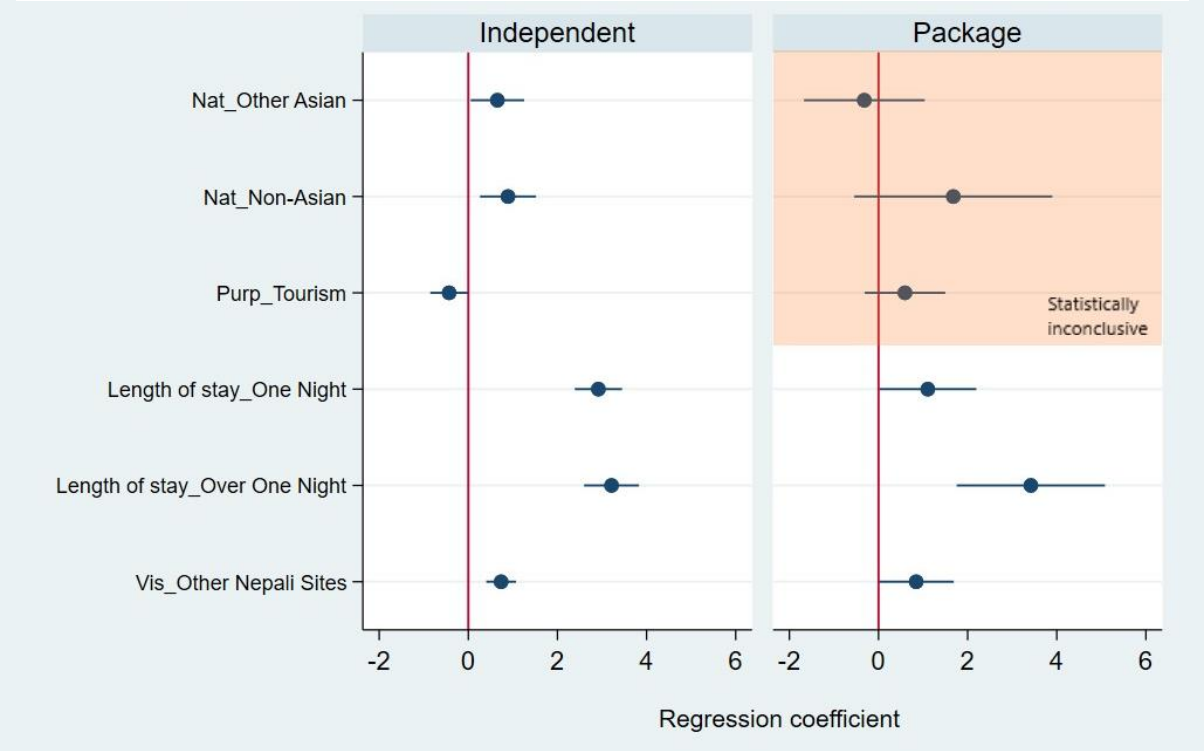


Figure 5.17 : Predictors of total spending: A comparison between independent and package tour groups



souvenir/shopping, the results are not statistically significant. The cross-tabulation indicates a similar pattern in mean spending by categories. Independent visitors spend more on average than package tours on travel, food/drinks and souvenirs/gifts but less on accommodation. These trends suggest that independent visitors have more diverse expenditures and therefore contribute to a broader range of tourism businesses and related sectors.

The difference in visitor spending becomes more significant when comparing types of groups, including small groups of single travellers or couples, larger groups of relatives and friends, and organised tour groups. The results of the ordinal logistic regression on the determinants of overall spending indicate that, by controlling with other variables the probability of spending more is higher among single travellers and couples compared to relatives and groups of friends, while it is significantly lower for organised tour groups. The regression coefficient of -1.77 indicates a strong negative relationship between the two cases. With an odds-ratio of 0.17, the probability of an organised tour group to spend more per person than a family/friend group is less than two tenth. By contrast, the odds for a small group of one single traveller or a couple to spend more in Lumbini than a larger group of family and/or friends was 2.2 times higher than the probability of the latter to spend more than the former. However, the breakdown by types of spending provides few results that are statistically significant. Few observations can be made,

based on the cross-tabulations results and the differences in the means for each type of groups. Families and friends spend on average an almost equal share on food/drinks, accommodation and transportation. By contrast, single travellers and couples tend to spend mainly on accommodation and food, with transportation and other local tourism offer (guides, souvenirs) representing a much smaller share of their overall spending. Over half of the organised tour groups' expenses per person are on accommodation, with limited spending on food/drinks, entrance fee and transportation and barely any on tour guides or souvenirs and shopping. From informal conversations with travel agency staff accompanying the groups, there is no or little time provided for shopping in Lumbini. Nearly all organised tours are travelling with their own guides and private vehicles coming from India and therefore do not require the local offer.

The other variables that have been analysed using both cross-tabulation and regression are religion of groups and purpose of visit. For the latter, the focus has been on identifying potential differences in spending between those visitors coming specifically for religious reasons and other visitors. While the cross-tabulations show some variations, particularly based on the religion of visitors, with the highest spending visitors being Christians and Buddhists, the results of the ordinal logistic regression are not conclusive and not statistically significant for overall spending. It is possible that the variations are due to other factors, including nationality, length of stay and type of trip organisation. By contrast, the 'Purpose of Visit' variable provides some conclusive results when analysing the determinants of the different types of expenses. The ordinal logistic regressions suggest that purpose of visit is a significant predictor for expenses on food and drink, transportation and shopping. The results suggest that, in each case the probabilities of purely religious visitors and pilgrims to spend more were lower than other visitors, with high negative regression coefficients particularly for food/drink and transportation.

An analysis of the breakdown of visitor spending by different types of groups and types of spending also provides additional interesting results. When the ordinal logistic regression is done for shopping (souvenir, presents, etc.) expenses, it reveals unexpected links between the latter, nationality and purpose of visit. Unsurprisingly, general visitors have higher odds of spending more on shopping and souvenirs than visitors coming for purely religious purposes. More surprising are the results for nationality which indicate that the probability of non-Asian visitors of spending more on shopping than Nepali/Indian visitors was lower, although the former is the highest spending category of visitors overall. The odds of Nepali/Indian visitors to spend more than non-Asian visitors on shopping were more than two times higher. The data collected from visitor surveys is not sufficient to make inferences on the causes of the negative

relation between non-Asian visitors and shopping (souvenirs, presents, etc.) expenses in Lumbini and whether the low spending is due to low demand for souvenirs and presents among these visitors or a misfit with the current offer and types of goods available.

Overall, the visitor survey has provided evidence to start filling the existing gap on visitor spending, and economic impact of visitors in Lumbini which are core indicators and sub-indicators of the framework developed for this thesis. The data also provides new perspectives and data on the current pilgrimage and tourism context in Lumbini and the social and economic impacts of these activities. It also offers an insight into visitors' spending patterns in Lumbini and therefore the distribution of the generated income across different businesses or sectors, including accommodation, restaurants and shops. The results, however, do not provide responses to all the different aspects of the relations studied and raise more questions that would need to be addressed in future studies. Beyond interviews with visitors, a business survey has also been conducted which provides another complementary perspective on Lumbini tourism industry.

5.3. Business survey results

5.3.1. Overview of survey implementation and sample

The business survey was conducted between 23rd-29th January 2018, with a few additional interviews conducted in February 2018 due to the unavailability of owners and managers during the earlier survey period. The survey was undertaken with a team of three surveyors, two students from Lumbini Buddhist University and the author. An initial test was done on the first day of the survey with minor adjustments made to the questionnaire, mainly to ensure consistency between surveyors.

A total of 105 businesses were surveyed including hotels and guest houses in Lumbini and restaurants and shops within the Municipality and the Lumbini Master Plan. A different sampling strategy was applied to hotels/guest houses and other tourism businesses (Figure 5.18). Since there are relatively few hotels and tourism businesses in Lumbini, the team aimed to interview all or nearly all hotels and guest houses in the Municipality. The Siddhartha Hotel Association of Nepal's (SHAN) hotel list was initially used to identify hotels and guest houses, but as businesses are not legally compelled to register with the association and the locations of hotels and guest houses are not mentioned the team covered all areas within and around the Lumbini Master Plan. The hotels that were not interviewed were either temporarily or permanently closed at the time of the survey or were registered with SHAN but their location could not be identified during the survey. For the latter businesses, it was unclear what their

current status was. It suggested, however, that while new businesses are added to the list, there is limited monitoring of business closures. By contrast, the sampling method for restaurants and shops were based on zoning. In each location, between one third and one quarter of all restaurants and shops were surveyed (Figure 5.18). Figures 5.18-19 provide the total number of businesses recorded and number surveyed by types (hotels/guest houses, restaurants, shops, etc.) and by location.

Figure 5.18 : Business survey population estimate and sample by type of tourism business

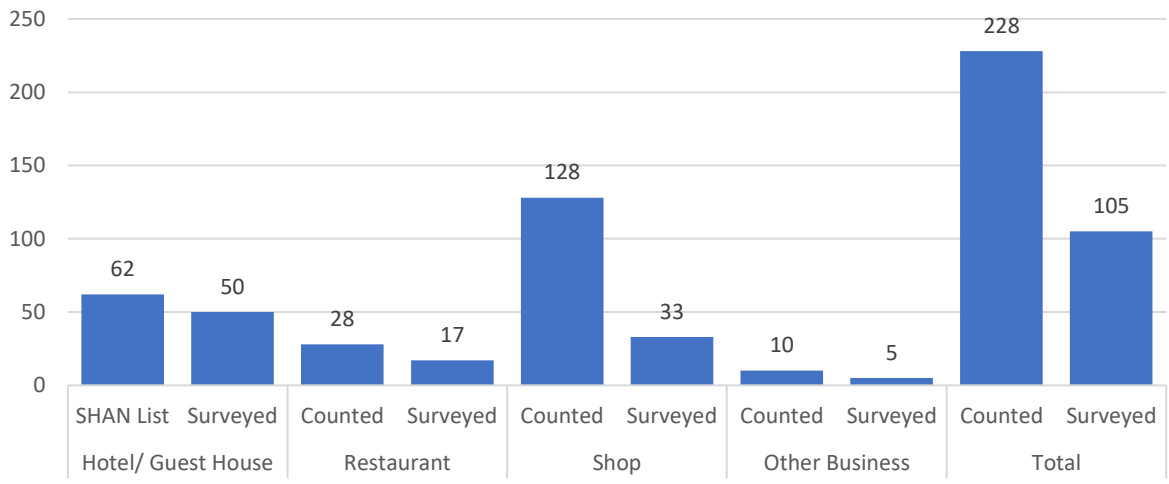
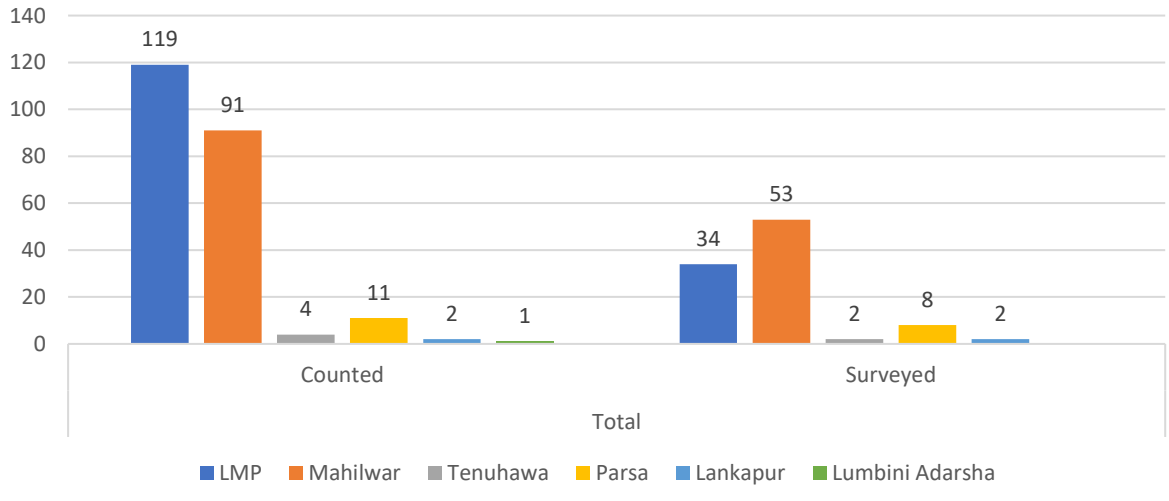


Figure 5.19 : Business survey population estimate and sample by areas within Lumbini Municipality



Overall, among the 105 businesses interviewed, 50 are hotels, 33 shops, 17 restaurants, five 'Other', including three travel agencies, one of two cycle rentals in Lumbini and a tea shop (for complete results see Appendix 16). The three hotels and accommodation in the LMP have been surveyed along with just over one fourth of all shops and restaurants in the Cultural Zone. Among the hotels interviewed outside the LMP, 11 are not listed on the SHAN hotel list for Lumbini. By contrast, there are at least two that are on the list but are inactive and permanently closed and two were temporarily closed at the time of the survey and therefore could not be interviewed. Most of the 11 hotels not listed have only recently opened within the last year, but some have been open for a few years and have not registered with SHAN. A few hotels were near completion at the time of the survey and planned to open within the following month, including one-star hotel under construction in Mahilwar and a five-star hotel along the road to Bhairahawa. In terms of respondents, whenever possible the owner and/or manager of the business has been interviewed. When both were unavailable, a member of staff, usually the most senior or longest in employment, has been interviewed instead. Respondents were free to refuse to answer all or any question during the interview. Questions regarding income and expenditure have been found to be the most challenging by the surveyors and have lower response rates.

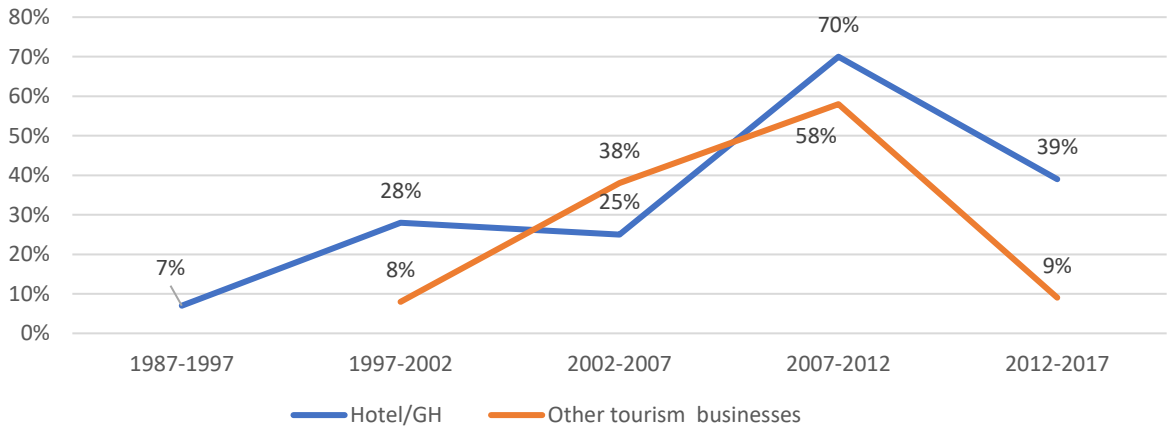
5.3.2. The business context in Lumbini

Nearly all tourism businesses are located within three main locations: 1) the Master Plan Cultural Zone where all shops were moved in early 2010s 2) The Mahilwar Bazaar and surroundings, to the east of the Sacred Garden and 3) Parsa Chowk, the crossroad to the east of the Cultural Zone, along the Taulihawa-Lumbini-Bhairahawa road. The areas to the west, north and south of the Project Area have few, if any, tourism businesses, although a few new hotels and some restaurants are being developed along the new tarmac road to the west/ south west of the LMP Project Area (Figure 5.19).

There are currently few high-class hotels in Lumbini, with only four hotels currently considered 'star class' or above categories (LDT 2012). Due to the long low season, most hotels and guest houses estimate their annual occupancy rate between 22% and 50%. The owners of hotels/guest houses that have reported very low annual occupancy rates have other sources of income, including restaurant, land and or handicraft shops. This low occupancy rate follows a period of rapid increase in the opening of hotel/guest houses, especially since 2008 (Figure 5.20). While the Bhairahawa Tourism Board registration office has recorded since 2008 on average two new hotels/guest houses per year, the data provided by the survey combined with

Figure 5.20 : Estimated compound annual growth rate of the number of hotels/ guest houses and other tourism businesses in Lumbini between 1987 and 2017*

(based on opening years of the 105 businesses surveyed in Jan-Feb 2018)



* the earliest opening date recorded for other tourism businesses was 1997, therefore no growth rate was calculated for the period beween 1987 and 1997

the SHAN hotel list suggests an average of six new hotels/guest houses annually, with between two and four permanent closures since the last inventory conducted in 2012 (LDT 2012). As mentioned in Chapter 3 (Section 3.4.3), the hotel registration list from the local Tourism Board in Bhairahawa only covers a time period from 2008 until present and includes only 'budget' and one-star hotels and guest houses. All other registrations are done through the Kathmandu-based National Tourism Board where the data is not publicly accessible. The local registration office therefore has incomplete data which does not allow to easily monitor the development of tourism businesses around Lumbini. The SHAN hotel list by contrast has more up-to-date information but only lists businesses that are members of the association. While their members represent the large majority of hotels and guest houses in Lumbini, a few hotels/guest houses surveyed were not registered with the association.

Similarly, the district commerce office in Bhairahawa provided a list of travel agencies and shops in the Lumbini Cultural Municipality. Among the shops and travel agencies surveyed 25 out of the 31 shops opened before 2017 were not on the district commerce office's registration list. No registration list was provided for restaurants. Overall at the start of 2017, the commerce office had 22 souvenir shops and travel agencies registered within the Municipality. Based on the survey team's head count for sampling purposes, the figure seems closer to 130-140, with over 30 in Mahilwar and Parsa (to the east), and between 116 (counted) and 121 (registered with the LDT) in the LMP Cultural Zone. No other gift or souvenir shop was identified in any other area in the Municipality, although some are registered in the district office. It is possible

that these businesses were among the ones moved to the LMP Cultural Zone in 2014, or that they have closed since registration without the list being updated. While the data collected does not cover the whole implementation period of the LMP, it bridges the gap identified in the previous chapter as part of the data gap analysis by providing additional information to estimate the annual growth rate of tourism businesses.

The business survey has provided very mixed results for collecting data on business expenditure and income to evaluate the income generated by the tourism industry. For shops and for second category hotels/guest houses (with max prices below/equal to 2,500 NPR), for instance, the income is often significantly lower than the expenditures stated. While many among them do respond that they have not made a profit over the last fiscal year, due to lower visitor (and particularly international visitor) numbers, the difference between expenditures and income remains too large to suggest that small local businesses can suffer such an annual loss. There are several factors that may explain these results. It is possible that the question was misunderstood by some respondents, who may have given the figure for the benefit rather than the income, for instance. But other factors are also suggested by the outcomes of interviews conducted in the mid-2000s in Lumbini. The researcher at the time reported her perception that "*people believe that if they show they are doing well and benefiting from the development of WHS they will miss out on the financial benefits that other poorer members of their community receive*" (Pandey 2007: 17). The large disparity between business expenditures and income seen among the smaller tourism businesses in Lumbini tends to support this observation, with respondents not disclosing their real income in case they miss out on potential financial support opportunities. Moreover, many owners of small businesses combined multiple sources of income, including agriculture and farming, and it is unclear to what extent they declare for tax purposes all the household revenues and income, including from their tourism business.

This is not an isolated result. Another pilot survey conducted in Champaner-Pavagadh Archaeological Park World Heritage Site, in Gujarat (India) provided similar disparities and inconsistencies in the responses on tourism business income (Krishnan et al. in prep). The results therefore suggest that the business survey approach and rapid assessment can hardly cover the gaps from the unavailability of revenue data from administrative sources. Visitor spending by contrast provides a better understanding of the distribution of visitor expenditures per category of spending and therefore a better understanding of the tourism sector's generated income and its direct economic contribution in Lumbini.

5.3.3. Who's in? Lumbini local communities and the tourism sector

The third objective of the business survey has been to identify the main actors and beneficiaries of the tourism business sector in Lumbini. This closely relates to the socio-economic indicators of the analytical framework. The survey has collected information on gender and ethnic/caste group business owners in Lumbini and their staff. The birthplace of business owners has also been recorded to identify whether certain communities participate and benefit more than others from tourism and pilgrimage activities in Lumbini. Since the Municipality has been unable to provide population profiles for the different former VDCs and current municipal wards, the survey results have been compared with the figures provided by the 2011 National Population Census (CBS 2014c) which cover all former VDCs (Table 5.10).

The tourism business owners are primarily male, with only six female business owners among the businesses surveyed. Two of them own a restaurant and four shops, none owns a hotel or a guest house. 46% of business owners were born within the area that is now Lumbini Cultural Municipality. Other owners are mainly from the Kathmandu Valley (14%) or other areas of Nepal (28%) while only 7% are from the wider GLA. A variety of ethnic/caste groups are represented among business owners, including indigenous populations, like the Tharu, other Tarai caste/ethnic groups and Hill caste/ethnic groups. Overall, 39% of owners are from Tarai caste/ethnic groups, including 6% specifically from Tharu indigenous groups, 43% Hill caste/ethnic groups. Certain Chhetri caste names are both commonly used in the Tarai and in the Hill region caste systems and cannot therefore be differentiated. A significant proportion of

Table 5.10 : Caste/ ethnic group of owner by type of business

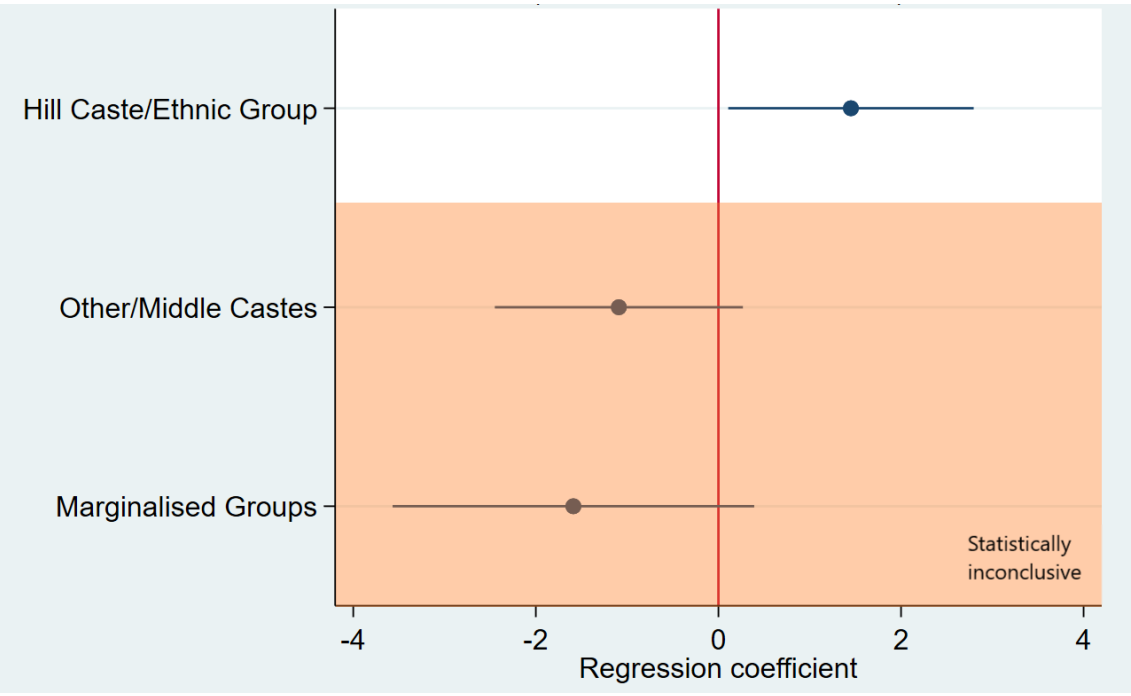
	Hotel	Restaurant	Shop	Travel Agency	Other	TOTAL	Proportion of businesses	Proportion of LCM total population*
Tarai Brahmin	2	1	3	0	0	6	6%	1%
Tarai Dalit	1	0	4	1	1	7	7%	23%
Tharu	1	3	1	1	0	6	6%	2%
Other Tarai castes/ ethnic groups	5	0	14	0	1	20	19%	32%
Chhetri	3	4	8	0	0	15	14%	1%
Hill Brahmin	23	5	1	1	0	30	29%	2%
Newar	9	2	0	0	0	11	10%	<1%
Other Hill ethnic/ caste groups	1	2	0	0	0	4	4%	3%
Muslim	0	0	1	0	0	1	1%	32%
Foreigner	2	0	0	0	0	2	2%	4%
Other	3	0	0	0	0	3	3%	-
Total	50	17	32	3	2	104	100%	97%

*calculated by author, based on CBS 2014c: table 2.3

owners are from higher castes, including 29% Hill Brahmin, 6% Tarai Brahmin and 14% Chhetri. The Newar community from the Kathmandu Valley is also well represented among hotel business owners in Lumbini. By contrast, Tarai Dalit and Muslim communities with respectively 7% and only 1% are less represented.

Different types of businesses seem to have different trends in terms of business ownership (Table 5.10). 46% of hotel owners belong to Hill Brahmin caste/ethnic groups and 18% are from Newar communities. Only one owner belongs to a Dalit caste and one to a Tharu individuals. By contrast, souvenir shops are primarily owned by Tarai caste/ethnic groups who represent over two thirds of owners. The shop owners were also 79% to be born within Lumbini Cultural Municipality while only 26% and 35% of hotel and restaurant owners respectively were born in Lumbini. The logistic regression model, which has focused on the relation between the type of business and characteristics of owners, indicates that the only conclusive determinant is the Hill/Tarai dichotomy (Figure 5.21). Based on the odds-ratio, the model suggests that the probability for a hotel/guest house to be owned by an individual belonging to a Hill caste/ethnic group is 4.3 times higher than someone belonging to a Tarai caste/ethnic group. While hotel and guest house owners tend to own the land and building, many shops tend to be run on a rental basis with therefore smaller initial investments. The former therefore only requires a small capital initially, which can be gathered from household savings rather than taking a bank loan.

Figure 5.21 : Predictors of hotel/guest house ownership
(based on 84 observations)



The tourism businesses in Lumbini have on average five employees, with large discrepancies between hotels/ guest houses which have on average 10 employees and the other businesses, particularly local shops which do not tend to have employees at all. The staff is primarily male, with women representing just below one quarter of the workforce (Table 5.11). Hill caste and ethnic groups are more represented than Tarai caste/ethnic groups within the workforce of the tourism businesses surveyed, particularly Hill Brahmin who accounts for over one quarter of the employees. Chhetris are also well represented, with 15% of the total workforce (Table 5.12). Unsurprisingly, there is a higher proportion of lower castes among the workforce than among business owners. For instance, 15% of the employees are from Tarai Dalit groups and 3% are Hill Dalit. Tharu indigenous groups represent 9% of the workforce. Muslim communities are significantly under-represented among the tourism business employees, especially considering that they represent nearly one third of the population in the Municipality. However, the high proportion of unspecified caste/ethnic groups indicate the limit of this approach as for bigger workforces, within the larger hotels, it is more difficult for respondents to be able to list all employees, especially when both owners and managers were absent, and respondents did not have access to the records.

Table 5.11 : Employment in tourism businesses by gender

Type of business	Survey sample Total (in number)	Women	Men	Gender UNSP
Hotel/GH	493	26%	70%	4%
Restaurant	62	15%	76%	9%
Shop and other	12	8%	67%	25%*
Total	567	24%	71%	5%

**Note: The no response rate is high for 'shop and Other Businesses' but only represents four employees in total and therefore has limited impact on the 'Total' average*

Logistic regressions have been used to better understand the relations between the variables related to employment and the types of businesses and owner's characteristics. The descriptive results indicate that women employees are more represented in hotels and guest houses, themselves more likely to be owned by higher castes or individuals belonging to Hill caste/ethnic groups. The logistic regression has been used to determine whether the owner's characteristics or the type of business is more significant in predicting female employment. The results of the logistic regression for female employment suggest that the main predictor of employment is indeed the type of business (Figure 5.22). The probability for hotels/ guest houses to have female employee(s) is 7.7 times higher than for other types of tourism businesses. The other independent variables linked to business ownership are inconclusive statistically. The data collected therefore tends to suggest that the presence or absence of women in the workforce

is related to the type of business and the different job opportunities offered in hotels and guest houses. The data does not, however, provide more information regarding the type of jobs occupied by women in the hotel/guest house workforces

Table 5.12 : Employee caste/ethnic group by type of business

	Hotel /GH	Rest.	Shop	Travel Agency	Other	TOTAL	Proportion of workforce	Proportion of LSM total population*
Tharu	37	11	0	3	0	51	9%	2%
Tarai Brahmin	5	0	0	0	0	5	1%	1%
Tarai Dalit	75	3	5	1	0	84	15%	23%
Muslim	22	1	0	0	0	23	4%	32%
Other Tarai caste/ethnic group	29	5	0	0	0	34	6%	32%
Hill Brahmin	137	11	0	0	0	148	26%	2%
Newar	16	1	0	0	0	17	3%	<1%
Hill Dalit	14	1	0	0	0	15	3%	1%
Other Hill caste/ethnic group	35	8	0	0	0	43	8%	3%
Chhetri	66	16	1	2	0	85	15%	1%
Foreigners	7	0	0	0	0	7	1%	4%
Other/UNSP	50	5	0	0	0	55	10%	3%
Total	493	62	6	6	0	567	100%	100%

*calculated by author, based on CBS 2014c: table 2.3

The other regressions used to analyse the relations between ethnic/caste groups in the workforce and types of businesses and owners' characteristics indicate that patterns varied for different groups. For Muslim employees, due to the low number of employees, there are too few observations to determine relations. There are, however, no Muslim employees in businesses owned by someone belonging to a Tarai caste/ethnic group and only one case among small businesses compared to hotels/guest houses. For low caste populations, the main predictor of presence or absence of Dalit employee(s) is the type of business with all other variables related to owner's characteristics being inconclusive (Figure 5.22). By contrast, for Tharu employees, the only predictor that is statistically significant is the caste/ethnic group of the owner (Figure 5.22). Based on the odds-ratio, the probability of having Tharu employees in the business workforce is 41.3 times higher when the business was owned by someone belonging to a marginalised caste or group, i.e. Dalit or Tharu owner.

Figure 5.22 : Predictors of marginalised groups employment
(based on 84 observations)

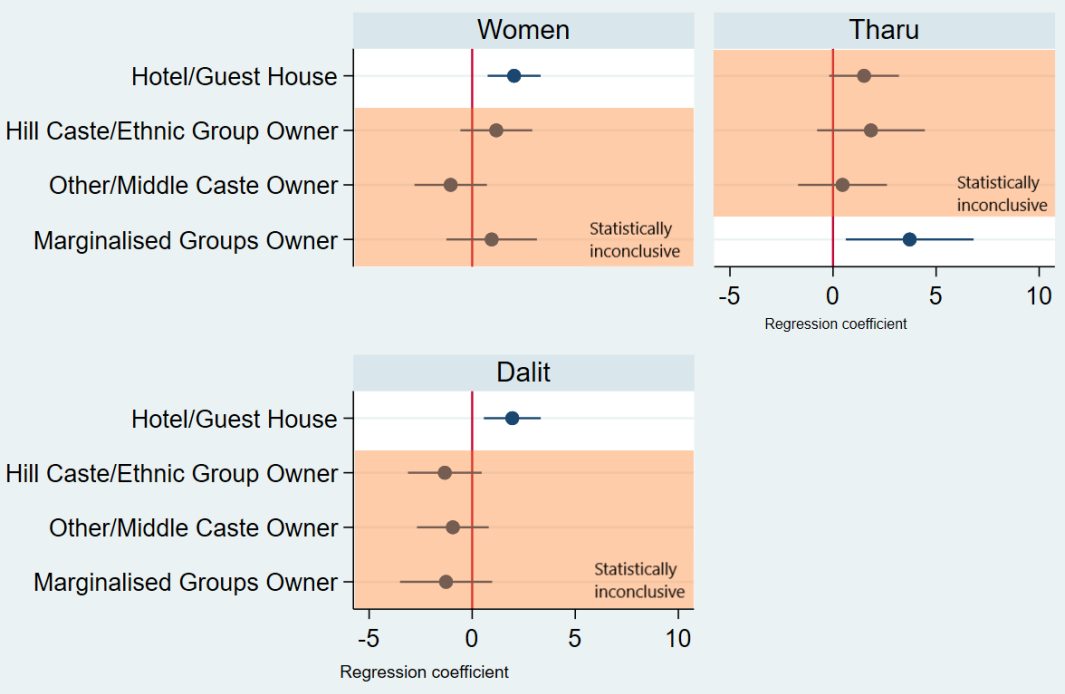
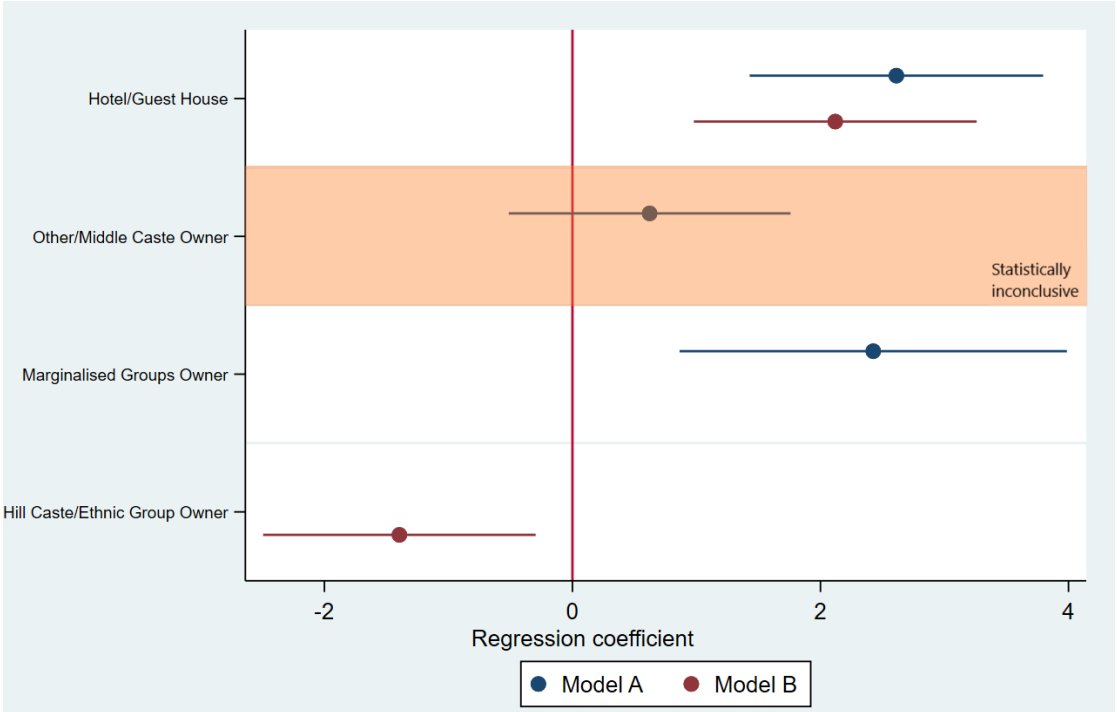


Figure 5.23 : Predictors of the share of Tarai employees in the workforce
(based on 86 observations)

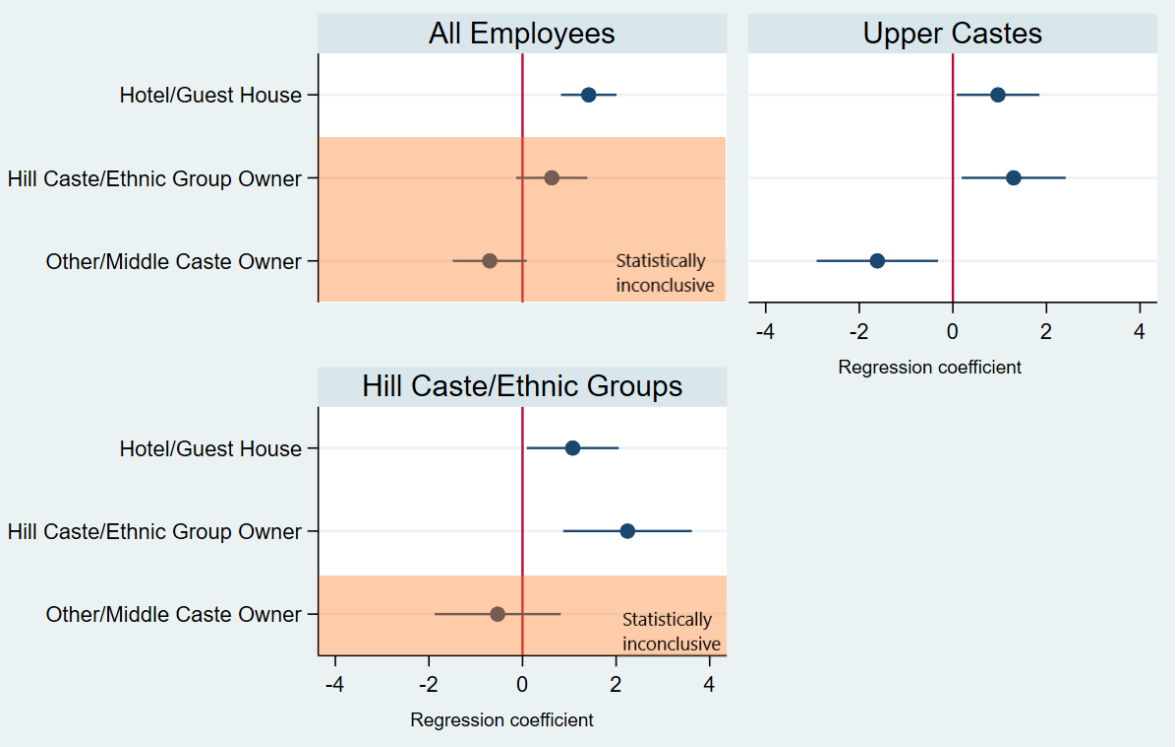


Model A Independent variables: V1_Type of Business and V3_Owner's Caste by hierarchy
Model B independent variables: V1_Type of Business and V2_Owner's Caste/Ethnic Group by region

The ordinal logistic regressions applied to employees belonging to Tarai caste/ethnic group provide different results (Figure 5.23). Due to the low occurrence of each case, the model was run twice, with two predictors: the first model controlled for type of business and owner's belonging to Hill/Tarai ethnic or caste group and the second has controlled for the former and owner's position in the caste hierarchy. The type of business is each time the main predictor, with a probability 14.7 times higher for them to be more represented in a hotel/guest house than in a smaller business. However, the second predictors in both models is also both significant. It is generally less likely for Tarai employees to represent a high proportion of the business workforce in businesses with the owner belonging to a Hill caste/ethnic group. By contrast, the probability of Tarai employees to be more represented in the workforce increased when the owner belonged to a marginalised group. Because there is a moderate collinearity between caste hierarchy and Hill/Tarai dichotomy, as owners from marginalised group are also often from Tarai caste/ethnic groups, it is difficult to determine the relation between the share of employees belonging to Tarai caste/ethnic group and these two variables.

Regression applied to employment of upper castes and Hill caste/ethnic group populations in the tourism sector have provided very different results (Figure 5.24). In this case the discrete values were used as the dependent variable in a binomial negative regression model. This

Figure 5.24 : Predictors of Hill and upper castes employment in the tourism workforce
(based on 84 observations)



enables us to look at variations on the full range of employee figures given during the survey. The results of this regression indicate that for both variables an important predictor of employment is whether the owner belonged to a Hill or Tarai caste/ethnic group, with another important predictor being the type of business. Based on the regression coefficient, the expected log count of Hill caste/ethnic group employees in businesses owned by someone belonging to a Hill caste/ethnic group is 2.24 higher than for those with a Tarai caste/ethnic group owner. The high coefficient may be partly due to the higher number of Tarai caste/ethnic group owners not having any employees at all, however, it also suggests that Hill caste/ethnic group owners are expected to have a higher number of employees belonging to Hill caste/ethnic groups. The regression coefficient for types of businesses is positive but lower, with hotels/guest houses having an expected log count 1.1 higher than smaller businesses for the number of Hill employees. For upper castes employees, both predictors are also significant, with slightly lower coefficients. In addition, the negative coefficient for owners belonging to neither low nor upper castes suggests that upper caste employees' expected log count in businesses owned by the latter owners is 1.6 lower than for businesses owned by individuals belonging to upper castes. There are too few cases of employees in businesses owned by marginalised groups to get results that are statistically significant.

The descriptive statistics tend to suggest that there may be more specific relations within each of these groups, including within Hill ethnic/caste groups, Tarai ethnic/caste group and caste hierarchy, although the small samples limit the possibilities for examining the relations further. The cross-tabulation indicates that businesses owned by owners who belong to the 'Other Tarai caste/ethnic groups' category employed primarily staff who are from the wider Tarai caste/ethnic groups, including 40% Tarai Dalit, 12% Tharu and 40% 'Other Tarai Caste/Ethnic Groups', but no Tarai Brahmin. While there is only a small sample of six businesses, the Tharu owners overwhelmingly have employees belonging to the Tharu community. They represent 80% of the employees among Tharu-owned businesses. By contrast, businesses owned by owners belonging to Hill upper castes, including Hill Brahmin and Newar owners, have a larger and more diverse workforce. They tend to be the main employers for upper caste employees, including Hill and Tarai Brahmin but also Chhetri. Except for a few working for a company-owned hotel, nearly all Newar employees work for Newar owners. By contrast, very few 'Other Tarai caste/ethnic group' work in businesses owned by Hill caste/ethnic groups, foreigners or companies. Tarai Dalit, Tharu and Muslim communities are however all represented within their workforce.

While the business ownership is a strong predictor of the workforce composition, the type of businesses and jobs available are also an important predictor. The results from cross-tabulations suggest that certain ethnic/caste group tend to work in specific types of businesses and jobs. Hotel/guest houses tend to attract the extremes with Brahmins but also lower Dalit overwhelmingly working in hotels/guest houses. Muslims are also nearly all working in hotels/guest houses with only one person working in another type of business (restaurant). By contrast, Chhetri, Tharu and Other hill caste/ethnic groups respectively formed 26%, 18% and 13% of the restaurant workforce.

Overall, the business survey has provided new data on all indicators related to business ownership, including the share of non-local business owners and the distribution by gender and caste/ethnic groups but also on tourism employment and its distribution (Table 5.13) for related indicators and sub-indicators.

5.4. Who benefits? Interpreting the results of the visitor and business surveys

The data collected through these surveys has begun to identify factors affecting the contribution and impact of tourism and pilgrimage in Lumbini on local communities. They provide data on the tourism offer and visitors' demand which enable to both define visitor and business activities but also start to identify potential explanatory factors for some of these observations within the visitors' practices and/or the current business offer. These are linked to existing leakages, especially in certain sectors like transportation, but also disparities in the level of participation of different communities and population groups in the tourism and heritage sectors.

The visitor survey provides a better understanding of visitors' spending patterns and therefore their overall contribution to the local economy but also the distribution across different sectors and businesses, including accommodation, transportation, restaurant services, souvenir/gift shops, and tour guide services. Based on these results, the largest share of visitor expenses goes to accommodation, followed by food/drink and transportation. These three categories are both the most widely shared expenses among visitors but also the highest costs. Although 40% of groups buy a souvenir or gift in Lumbini, the amount spent tends to be very low, most of them spending between 500 and 2,000 NPR as a group or between 100 and 400 NPR per person. The shops in Lumbini primarily sell cheap items manufactured in India and/or Kathmandu. Some of them were persuaded in the mid-2000s to try to sell clay statues produced by the Bhagwanpur sculpture production centre and the Tharu handicraft production centre in Mahilwar, both founded by the UNDP TRPAP project (Dhakal et al. 2007). During the scoping interviews, some

of the shop owners mentioned that they had stopped selling these items, as they were too expensive and the quality was not as good as similar Indian products. One of them showed us some of these items that he still had in the shop but had stopped displaying and selling.

Table 5.13 : Business survey results and analytical framework indicators and sub-indicators

Indicators	Sub-indicators	Evaluation
1.2. Business Creation	1.2.1. Current number of tourism businesses in Lumbini	216-228 recorded businesses, including hotels/guest houses, restaurants, shops and travel agencies
	1.2.2. Annual growth rate of tourism businesses between 1978 and 2018	Estimate compound growth rates based on opening years covering the period from 1987 until 2017
	1.2.3. Share of non-local business owners	Based on birthplace, 54% of all business owners were not local, with a higher proportion for hotels (74%)
1.3. Income generated by the tourism sector	1.3.1. Total tourism business income	Uncertain results
	1.3.2. Total tourism business expenditures	Uncertain results
3.1. Overall direct employment	3.1.1. Number of people employed in the tourism sector	Hotels/GH: 513-611 staff
		Restaurants: 102 staff (based on an average 3.6 employees)
		Other small businesses: 44 (based on an average of 0.3 employees)
Employment distribution by gender	3.2.1. Distribution of business owners by gender	6% of businesses owned by women
	3.2.2. Distribution of employment by gender	Women represented 24% of the workforce of business surveyed
3.3. Income poverty reduction	3.3.1. Distribution of business owners by caste/ethnic groups	Estimates of the distribution by types of businesses, caste hierarchy and caste system (Hill and Tarai) (see table 5.10)
	3.3.2. Distribution of employees by caste/ethnic groups	Estimates of the distribution by types of businesses, caste hierarchy and caste system (Hill and Tarai) (see table 5.12)

On this same question of the souvenir/gift offer in Lumbini, the business survey data tends to suggest that the communities producing the local handicrafts have limited direct links with these businesses. Only one shop surveyed is owned by someone from the indigenous local Tharu community. The disconnection between the producing communities and the retail market may be particularly problematic when it comes to promoting and selling handicrafts. In Lumbini, this disconnection translated, for instance, in poor promotion of the items produced by the local production centres which were, based on the TRPAP report (Dhakal et al. 2007), not differentiated from manufactured items nor advertised as handicrafts. As a result of the lack of strong market linkage, but also the current limited demand, the TRPAP's business initiatives and community centres have not been long-lived. In February-March 2017, when the author visited, the basket production centre in Mahilwar village was closed and used for storage of agricultural production, while only one potter out of four was still using the sculpture production centre in the village of Bhagwanpur. He used it primarily as an additional source of income, making sculptures for local Hindu shrines during the festival periods. Few hotels and travel agencies promote the local products or services, including the village tours that were designed as part of the UNDP TRPAP project (2001-2006) and which included these production centres and the Tharu Museum in the village of Sombarsi in former Khudabagar VDC and a cultural group in the village of Mahilwar performing traditional dances and songs. Both were also inactive at the time of the scoping visit, although a women's group had reopened the Tharu Museum, with support from LDT and the Municipality, at the author's last visit in January 2019.

The other characteristics of tourism and pilgrimage activities in Lumbini highlighted by the results of the visitor survey are the different practices of different visitor groups and their impact on visitor spending patterns. Length of stay, nationality, travel arrangements (independent vs package) and purpose of visits are all factors that intertwine to affect visitor spending patterns in Lumbini. This data combined with interviews begins to provide an understanding of the leakages related to the different components of the local tourism offer in Lumbini. The results indicate that most visitors still spend little time in Lumbini, with just over one third (36%) staying overnight. While longer length of stay goes hand in hand with increased visitor spending in all categories, the other factors tend to have variable impacts on the distribution and nature of visitor spending. For transportation, for instance, several well-represented visitor groups, including package tours and domestic visitors travel mainly with their own non-local personal vehicle (private bus, personal car, etc.) limiting the demand for local transportation. Based on interviews with transport committee members and drivers, the current situation particularly affects the revenues of taxi drivers in Lumbini. Moreover, considering that 87% of independent

visitors do not visit any other sites in the region, their demand for local transport is also limited to their arrivals/departures and occasional rickshaw or bicycle rental. However, the data indicates that only a small proportion of visitors uses transportation services offered within the Project Area.

Another local offer which appears to be under-used is the tour guide services. While tour guides represent a significant expense when hired, only 4% of visitors use this service. The high cost of hiring a tour guide may be a deterrent for many groups but another significant factor is that most foreign visitors who are also among the highest spending groups come as part of a package tour and therefore already have their own tour guides. These practices limit the demand for on-site tour guide services. Indian visitors, by contrast, are among the main groups making use of the local tour guides. While the demand for the latter is limited, most of the training provided in the tourism sector involve tour guide training. Based on the scoping interviews, due to the low demand, most of trained tour guides are now either inactive or only doing it sporadically as a source of extra income. There is therefore no consistency or visibility of the tour guide services, and guides may or may not be readily available when visitors might need them. For instance, in both 2017 and 2018, the tour guide office in Lumbini was found to be closed on several occasions.

While the visitor survey provides a perspective from the demand side, the business survey starts to provide lines of reflection regarding factors affecting participation in the tourism sector. The results highlight significant trends in the current tourism business ownership and employment data which indicate that different population groups and communities interact very differently with the tourism sector. Major trends include the under-representation of certain population groups and communities, including women or Muslim populations, and over-representation of other communities, especially belonging to Hill caste/ethnic groups. Interviews conducted with members of the local transportation committees suggest that certain under-represented groups, like Muslim or Dalit, may be more represented among rickshaw drivers particularly. For instance, a Muslim driver estimated the number of Muslim rickshaw drivers between 25 and 30 among the 128-160 drivers, which would account for nearly 20% of the total workforce. Imbalances are therefore visible across the tourism sector but also between the different types of businesses.

The results of the survey clearly indicate that religious or caste/ethnic affiliation was an important factor in local residents' participation in the tourism sector, both in terms of ownership and employment. Except among the few star-class or above category hotels, a large

proportion of businesses are owned by people born in Lumbini and/or Rupandehi District. However, the owners belong primarily to specific caste/ethnic groups within the Municipality. Economic capital certainly plays a significant role, with households from upper caste/ethnic groups, especially Brahmin, Chhetri and Newar having higher per capita income and consumption than lower castes and other caste/ethnic groups (Subba et al. 2014: table 4). However, scoping interviews also suggested other socio-cultural factors affecting participation in tourism-related jobs. For instance, some Muslim respondents mentioned that they had little interest in tourism employment as it was hardly compatible with their religious practices (including prayer times). By contrast, a hotel owner born in Lumbini from an upper Hill caste household mentioned that many of them among the earlier business owners had been moved from the old Lumbini Bazaar, located inside what is now the Sacred Garden, and therefore were already involved in trade beforehand. The opening of a tourism business in Lumbini was therefore a shift to benefit from the new trade opportunities provided by tourism and pilgrimage development.

Related to this question of traditional occupation, landholding also appears to be an important factor in tourism participation. While the accessible data for Lumbini Municipality does not enable the size of landholding by caste/ethnic group locally to be defined, national trends and research conducted at other locations in the Tarai suggest landholding patterns among the different communities present in Lumbini which could partially explain the results of the quantitative analysis along with remarks made during the scoping interviews (Pandey et al. 2006; Aryal 2010). The communities that have on average smaller land parcels or no agricultural landholding at all in the Tarai tend to be Dalit (Table 5.14). Hill caste and ethnic groups, including Hill Chhetri, tend to have average sized land parcels in the Tarai with potentially other assets in the Hills. Among the Tarai communities with average or larger landholdings were Tarai 'Middle-Castes' and Tharu (Subba et al. 2014: table 4.2). The former group tends to be under-represented in the tourism workforce in Lumbini. Tharu populations, by contrast, are fairly well represented among the tourism sector workforce. However, in Lumbini the Tharu population landholdings in Mahilwar have been strongly affected by the LMP land acquisition and the following resettlement programmes. For instance, the new Lumbini Bazaar area used to be owned by Tharu landlords and is now one of the most densely occupied area of Lumbini with the large landholding split between multiple parcels. As mentioned in Section 3.3.2, interviewees have mentioned that a number of Tharu households also spent part or all their compensation money on festivals, wedding ceremonies, or other short-term expenses rather than reinvesting on purchasing land. Therefore, the landholding patterns observed in other

Table 5.14 : Land holding status of households by caste in Sunsaari and Rautahat (Tarai)*, based on a field survey conducted by Pandey et al. (2006: adapted from table 4.2 and 3.5)

Caste	0.0-5.0	5.1-10.0	10.1-15.0	15.1-20.0	20.1-25.0	25.1-30.0	30.1-35.0	35.1-40.0	40 and above	Only Homesteads	Total
Upper Caste	16	12	10	7	2	4	2	2	0	1	56
	39%	21%	18%	13%	4%	7%	4%	4%	0.0%	2%	100%
Hill Dalit	17	2	0	1	0	0	0	0	0	24	44
	39 %	5%	0.0%	2%	0.0%	0.0%	0.0%	0.0%	0.0%	55%	100%
Tarai Dalit	10	3	1	0	0	0	0	0	0	10	24
	42%	13%	4%	0.0%	0.0%	0.0%	0.0%	0.0%	0.0%	42%	100%
Tarai Middle-caste	10	5	4	1	0	1	0	2	2	4	29
	35%	17%	14%	3%	0.0%	3%	0.0%	7%	7%	14%	100%
Tharu	15	1	7	5	1	2	3	2	5	3	45
	33%	2%	16%	11%	2%	4%	7%	7%	11%	7%	100%
All Castes	53	22	15	9	2	5	2	4	2	39	153
	35%	14%	10%	6%	1%	3%	1%	3%	1%	26%	100%

* Land in Ropani: 20 Ropani of land make one hectare

areas of the Tarai may not be representative of the overall Lumbini Tharu communities. By contrast, the large landowners, excepting Muslim communities, are more represented among tourism business owners, notably the Tarai Brahmins who are over-represented compared to their weight in the Lumbini population distribution by caste/ethnic groups. Based on the scoping interviews in Lumbini, Muslim communities who are both under-represented as business owners and employees had a different approach, looking more towards foreign employment for additional source of income. The additional income is then used to fund special events (weddings, etc.) but also to purchase additional land and increase their landholdings.

The quantitative data only provides limited information on the dynamics at play between different communities, especially within the larger businesses, like hotels/guest houses with a larger workforce. The business survey indicates that the composition of the workforce is very different depending on the type of business. Hotels/guest houses have high numbers of Hill caste/ethnic group and Chhetri staff but also Tarai Dalit employees. Tharu employees also represent 8% of the hotel/guest house workforce but also 18% of the restaurant staff. The survey data is not sufficient to provide a more detailed picture of the division of position/jobs between these different communities and whether certain groups tend to be associated to specific positions/tasks, including managerial, public relations, cooking or cleaning positions for example. The sample of employees interviewed who were primarily in senior and managerial positions tends to suggest that the Hill caste and ethnic groups and Chhetri are well represented in these qualified positions and suggests that other groups, notably Dalit employees remain

mainly relegated to less visible and lower-wage positions. The latter are also barely represented in the restaurant workforce but consist of nearly all the shop employees. Overall, these results tend to sketch a picture of tourism workforce and ownership patterns which strongly mirrors the already existing inequalities between these communities and population groups.

The other dynamic on which the survey provides an insight is related to the owner-employee interactions and power relations. The workforce composition varies widely depending on the type of owners and their caste/ethnic group. For instance, within the Tarai caste/ethnic group-owned businesses, the workforce is primarily Tarai-based, although no Tarai Brahmin are employed by owners from lower castes while the Hill Brahmin-owned businesses tend to have a high proportion of Hill caste/ethnic groups and low castes from the Tarai, including Dalit but also Muslim employees. Partly this difference may be due to recruitment strategies of business owners, the needs of different types of businesses and the different level of qualifications and training among different communities. By contrast, businesses owned by Tarai caste/ethnic group owners may be more based on the proximity of the workforce, i.e. family, relatives, local network of acquaintances. But there are other patterns that cannot be explained by the business recruitment strategy and suggest the potential agency of employees. The majority of the Other Tarai Caste/Ethnic Groups, for example, work for owners belonging to the same category (40%), Other Hill Caste/Ethnic Groups (33%) and Tarai Brahmin. None of them work for foreign-owned accommodations, nor for a Tarai Dalit owner. This observation suggests that employees might also make their own decisions regarding the types of businesses and owners they are willing to work for. While further research may identify additional other factors, the results of the survey tend to indicate that these decisions may be closely grounded in community identity and traditional socio-cultural systems. Overall, these observations tend to suggest that there is a complex dynamic between owners and potential employees' decision-making strategies which affect the composition of the tourism sector's workforce and which will therefore affect the impact of future development plans and the outcomes of policies towards marginalised groups.

The findings of the survey suggest that there are few women engaged in the tourism sector, particularly as business owners. Only six women owners were surveyed, none owning a larger business, like hotel or guest house and only one of them having a single employee. One woman shop owner is Muslim, all others belong to upper castes (Brahmin/Chhetri) and Hill caste/ethnic groups. There are more women employed in the tourism sector, although the current data does not provide sufficient information to identify whether women employees are associated with specific jobs nor to relate gender with specific caste/ethnic groups. Among the 15 female

respondents of the survey, only three belong to a Tarai caste/ethnic group, including the Muslim shop owner but also one owner's relative belonging to a Tarai Dalit caste and a Tharu relative. All the other women interviewed, including five hotel managers, belong to Hill caste/ethnic groups or upper castes (Brahmin/Chhetri). While this sample is not sufficient to generalise about the whole female workforce, it raises questions regarding the equal participation in the tourism sector among local women. While unequal access to ownership and tourism employment is not limited to women, this issue is particularly important in this context as investments in the tourism sector in Lumbini has often been associated to 'pro-women, pro-poor' policies (Dhakal et al. 2007). However, the results from the survey tend to suggest that the women who are not engaging/participating in the tourism sector are also the more marginalised. While access to capital is a major issue, these questions of women participation are also closely linked to socio-cultural factors within different communities. Most women interviewed are not the main income provider of their household. The shop is only an additional source of income for the family.

The data along with the outcomes of scoping interviews therefore suggests certain factors at play, including capital, cultural, caste, educational factors but also community networks and potentially landownership. While the data collected provides several lines of thought regarding factors affecting participation in the tourism sector, the causal links remain unclear both for the trends visible in business ownership and the links with tourism employment. It also raises questions regarding the impact of these differences/inequalities in the tourism sector participation for different communities and population groups on each community and groups and on community relations. Previous research has highlighted tensions between communities due to the implementation of the Lumbini Master Plan, with the loss of land and houses at a time, between the 1980s and 1990s particularly, when the population was increasing rapidly in Lumbini linked to various waves of migration (Pandey 2007; Molesworth and Müller-Böker 2005). Moreover, the surveys provide a perspective for business employment and ownership but results of interviews with local residents suggest similar potential imbalances in other areas, including access to training and to social programmes provided by monasteries, local CBOs and NGOs. For instance, several respondents mentioned that they were rarely aware in advance of training or social programmes taking place. The circulation of information and communication may thus be limited to certain well-informed networks of local residents.

5.5. Conclusion

This chapter met Objective 4 of this thesis by presenting and discussing the results of rapid assessments that have been used to start bridging the evidence gap to evaluate the local social and economic impact of the LMP and related tourism and pilgrimage activities. The primary data collection combined semi-structured interviews, focus groups and participant observations with more quantitative methods, including visitor and business surveys. The outcomes of this data collection have provided new insights into the characteristics of tourism and pilgrimage in Lumbini and the factors affecting their contribution to local development. They have confirmed issues raised in previous reports and research that have been discussed in Section 3.4, which are primarily based on stakeholders' interviews or small samples. The thesis has notably provided quantitative data on the short length of stay of visitors, their limited spending locally and various market leakages related to poor backward linkages with local production and services. There are, however, significant contrasts between the results of the thesis' surveys and estimates provided by international consultant reports discussed in Section 3.4. The estimated direct output of tourism in the GLA of 26.9 million USD, is notably based on estimates of visitors spending that are strikingly higher than the results suggested by the thesis (TRC 2013: Table 12). These disparities indicate that the revenue losses related to the low visitor spending locally and poor retention rates have been underestimated. These results have implications on the expected return on investment of the on-going large-scale infrastructure development projects in the GLA. Without targeted policies and interventions to address the leakages, the returns risk to be lower than expected.

In parallel, the data collected in Lumbini provides evidence to better quantify the repercussions of these leakages on different sectors and investigates these issues further, by looking at the relations with key determinants of visitor spending. Key factors driving visitor spending have been identified, including increasing length of stay, visiting other sites and integrating Lumbini a regional and national circuit. The business survey has provided complementary data to consider factors encouraging or limiting benefits or participation at the local level. The latter are linked to local economic but also socio-cultural factors and complex dynamics between different communities in Lumbini and other related regional, national and international actors.

The following chapter discusses these results in the light of on-going and future developments for Lumbini and the use of the data collection methodology developed for Lumbini in bridging the evidence gap for the site, but also its potential use at other heritage sites in South Asia and

for developing approaches to documenting and collecting data and evidence regarding the social and economic impact of heritage.

CHAPTER 6: MOVING FORWARD: IMPLICATIONS AND LIMITS OF THE EVIDENCE FOR EVALUATING THE SOCIAL AND ECONOMIC IMPACT OF LUMBINI'S DEVELOPMENT

6.1. Introduction

This chapter discusses the implications, limits and possible applications of the approach developed in this thesis (Objective 5). It focuses particularly on the wider implications of the results and possible applications of the methodology developed. The discussion revolves around the thesis' outcomes and their potential in building evidence to inform heritage management and practice in Lumbini and considers parallels with other South Asian and World Heritage Sites. Ultimately, it examines the possible applications of the methodology at other sites, its contribution to heritage management and practice, but also the challenges in using it in other contexts.

The data gap analysis presented in Chapter 4 indicated that the data that has been collected so far in Lumbini is insufficient to control, monitor and evaluate the social and economic impact of the large-scale investments that have been committed to the site development. The primary data collected in this thesis is currently the most complete dataset on visitors, their contribution to the local economy and the local tourism sector in Lumbini. With the completion of the LMP expected by 2020, the development of Lumbini has now arrived at a transitional period and this data and information provide evidence to reflect on and to shape impacts of on-going activities and define strategies for future plans for the management of Lumbini and the GLA. The chapter therefore starts with a critical overview of the different directions currently proposed for the post-LMP era in light of the results provided by the data gap analysis and primary data collection in Lumbini. After providing a brief description of proposed plans and their stated social and economic objectives, it goes on to discuss whether they successfully respond to key existing data gaps and limitations in the current social and economic contribution of the site development identified as part of this research. Among the key aspects discussed are their local development objectives and policies in place and the processes developed to monitor and evaluate local economic and social impacts. This first section also discusses the plans' responses to some of the issues and challenges identified in the analysis of the primary data results related to widespread local participation and local benefits, notably for marginalised groups.

The findings from Lumbini have also wider significance for the management and evaluation of the local economic and social impacts of heritage, and related policies and interventions. Using

Lumbini as an example, the thesis research complements existing literature by discussing some of the dynamics and processes which affect the social and economic impact of heritage and tourism and its contribution to local development. The thesis provides another perspective on the nature of market leakages, based on both quantitative and qualitative evidence, notably in a developing country and at the local level where this issue is the most significant. The results of the business survey, moreover, offer a platform and new evidence to discuss local participation and the benefits of heritage and tourism for marginalised communities. By combining the current evidence with a review of the long-term site development and management until present, the research offers a reflection on the role of planning and management at different levels in generating or limiting economic and social benefits. The second section of this chapter discusses particularly the implementation of the LMP, notably its isolation from local and regional development plans, and the consequences at every stage of the site development on local economic and social impacts.

Beyond the case study, the thesis' data gap analysis approach has potential applications in the process of evidence-building for heritage, tourism and development in an international context focused on evidence-based policies and interventions. The last section of the chapter discusses the contribution that a data gap analysis approach can make in developing evidence at site level, or even at wider regional and national level, on the economic and social impacts of heritage. It also introduces some challenges, related notably to the scope of the impact evaluation, especially its links with broadly discussed ethical issues in heritage identification, protection, conservation, presentation and interpretation. Ultimately, the different sections also reflect on the thesis research process and the considerations that have emerged beyond the initial thesis objectives, especially in relation to the role of community engagement in the evaluation process. This discussion also builds on pilot projects that the author has been involved in as part of Durham University's UNESCO Chair in Archaeological Ethics in Cultural Heritage Practice research programme, linking them and the results from Lumbini with the relevant existing literature from heritage, tourism and development studies.

6.2. Lessons learnt? Planning for the post-Master Plan era and future directions for the development of Lumbini

6.2.1. Introduction

The development of Lumbini has now arrived at a transitional period, with the implementation of the LMP nearing completion. Multiple actors have been involved in designing future plans for the site and for tourism and pilgrimage development in the surrounding area. The UNESCO/JFIT

mission and the Integrated Management Framework (IMF) for Lumbini (currently awaiting the Nepal Government's approval) have worked both on redefining the management framework for the site but also future developments focusing notably on "*the sustainable development of the Historic Buddhist Region [Greater Lumbini Area]*" (Weise 2013: 7). Also taking a regional approach, the World Bank Group (WBG) and the Asian Development Bank (ADB) have been active in upgrading the regional infrastructure, including road widening and a second upgrade of Bhairahawa Airport into an international facility (Government of Nepal 2013; IFC 2013). Other stakeholders have made different proposals centred around further large-scale infrastructure development in Lumbini itself and reconceptualised the religious and pilgrimage experience at the site and its surroundings, beyond the LMP design. Among these projects, the Lumbini World Peace City Master Plan, prepared by Dr Kwaak and ESPRI, was approved in 2014 by the Nepal Government. Supported by the Korean Government, through the Korea International Cooperation Agency (KOICA), the plan builds on concepts developed as part of the *World Buddhist Summits* that were hosted in Lumbini in 1998 and 2004 of "*Fountain of World Peace*" and later "*World Peace City*" (Kwaak and Brenes 2000; Kwaak and ESPRI 2014) to plan large-scale infrastructure developments around the LMP Project Area.

The multiplication of plans for Lumbini and its surrounding area have raised expectations for potential new economic gains from tourism, but it has also raised concerns. The latter relate primarily to the environmental and heritage impact of the planned developments and to the integration of all these alternative plans. This section reviews all these different directions for the future of Lumbini, focusing on how they relate with each other but also how they integrate local and regional development. The plans are discussed in the light of the LMP experience and the responses provided to the shortcomings identified in the thesis related to the conception, preparation and implementation of the plan (Chapter 2 and 3). Moreover, they are reviewed in relation to the new concerns related to sustainability and the environmental costs of accelerated development in the region. More specifically, this section considers evidence building, monitoring and evaluation processes developed to bridge the current data gaps identified in Chapter 4 and inform their implementation, but also policies and measures in place to address issues of local participation, notably for marginalised groups, and leakages discussed in Chapter 5.

6.2.2. Lumbini World Peace City Master Plan

The 1998 World Buddhist Summit designated Lumbini as the "*Fountain of Peace and the Holiest Pilgrim Center for the Buddhists and Peace Loving People of the World*" (LDT 2013: n.p.; Vaidya

and Khatri 1999). From 1998 until 2014, several studies and reports were prepared by international consultants, with support from UNDP and KOICA, and discussed notably at the 2004 World Buddhist Summit (Kwaak and Brenes 2000; Boswell 2004; Kwaak and ESPRI 2014). The final design proposed by Kwaak and ESPRI is the Lumbini World Peace City Master Plan, finalised and approved by the Nepal Government in May 2014. This new Master Plan has the following objectives:

"1) Preserve and protect the historical, cultural, religious and ecological treasures of the area.

2) Embody the principles in practical application of the three treasures of Buddhism, namely: Buddha, Dharma, Sangha.

3) Provide a living and learning environmental model conducive to self-enlightenment and to the formation of more harmonious Global Village Civilization.

4) Alleviate poverty and improve the quality of life in rural villages in greater Lumbini area." (Kwaak and ESPRI 2014: 9)

Despite, these broad objectives and like the LMP in the 1970s, the World Peace City Master Plan remains primarily an infrastructure planning exercise. One of the main results of the Master Planning process has been to segment the Municipality and the wider region of Lumbini into different zones with different land uses. The World Peace City covers an area of eight by eight kilometres, with the original Project Area preserved at its centre. A wider zone of 24 by 24 kilometres, acting as a buffer zone and area for long-term expansion of the city, forms "'*Lumbini, P.H.D.*' *- that is, the 'Peace and Harmony District'*" (ibid.: 6; Figure 6.1). The land use within the City area is envisioned to represent a lotus which is an important Buddhist symbol, particularly associated with the Buddha's birth.

At the heart of the lotus, the Buddha zone forms an inner circle of 0.8 kilometres radius, around which is the Dharma Zone of 1.6 kilometres radius. The latter is envisioned as a "*natural undeveloped open forest area*" (ibid.). Unlike the LMP which recommended relocation of villages, there is no mention in the World Peace City Master Plan regarding the future of the villages currently located within this area (Kwaak and ESPRI 2014: 14). Each petal of the lotus flower is a Sangha Zone (Buddhist monasticism) which adapts to or integrates some of the other existing villages. Beyond the eight by eight kilometres, space is dedicated to new rural villages and lay populations to live in. Additional features connecting all these different zones include meditation canals, and ring roads and other secondary road systems, water supplies, sewage systems, school and medical clinics.

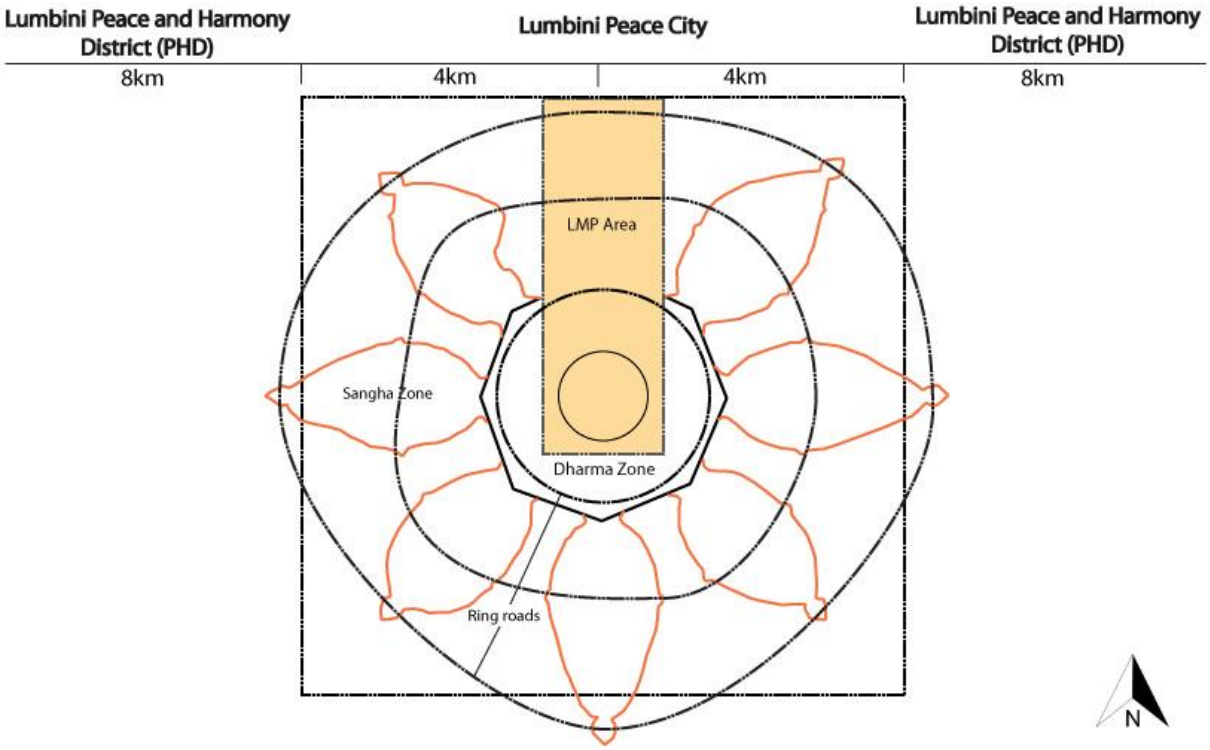


Figure 6.1 : Sketch plan of the different components of the Lumbini World Peace City

Source: Author, adapted from Kwaak ESPRI 2014: 13, 18.

The Dharma Zone which currently includes the New Lumbini Bazaar, Lankapur and Thulo Paderiya villages would be a "*natural undeveloped open forest area*" (p14)
The Sangha Zones either integrate or circumvent existing villages; they include a monastic areas, residential areas and public facilities, including schools and green areas. Between the Sangha Zones are agricultural zones.
The Lumbini Peace and Harmony District is an area planned for longer-term development for more "peace-loving world citizens" (Kwaak ESPRI 2014: 13) to settle in the wider region in the future.

These developments closely echo the physical planning undertaken as part of the LMP. Beyond the infrastructure development and zoning, the plan does not provide the management structure and processes, nor activities to meet its wider objectives (listed above). The plan does not address the limitations related to the implementation process or its lack of linkages and integration with local and regional development plans (Section 3.2). As a result, it does not provide responses to negative impacts that have been associated with the LMP-related infrastructure development, including land acquisition, loss of agricultural land and farmland, and water access. This is particularly problematic as, compared to the LMP, the scale of the infrastructure planning is much larger, with significant expected impacts on population density. The World Peace City core area is planned to cover 6,475 hectares, for a population of 160,000 people and 781 hectares new housing area (Kwaak and ESPRI 2014: 20) which represents an unprecedented increase from the current total population in the Lumbini Cultural Municipality of 72,497 people in a municipal area covering 112 hectares (Lumbini Cultural Municipality 2017).

The city expansion will induce large losses of agricultural land within the Municipality which still forms the basis of the local livelihood.

The World Peace City population is also envisioned to include current local communities, as well as an expanding Buddhist monastic community and international migrant population of lay Buddhists settling in the area. While the plan recommends the creation of a commission and councils as local consultation and conflict resolution tools, there is no provision for ensuring representation, participation and empowerment of local communities, and particularly marginalised groups and communities. Despite its objectives to "*alleviate poverty and improve the quality of life in rural villages*" (Kwaak and ESPRI 2014: 9), there is limited evidence that the plan implementation would encourage income redistribution towards marginalised communities, nor that it addresses existing social inequalities (Section 5.3-5.4) and inter and intra-community conflicts which have been an important aspect of the recent history of the Nepal Tarai (Sections 2.3.2 and 3.3.2).

The estimated cost of the project is 762 million USD, with an estimated "*US$170 million dollars is expected to come from ODA [Official Development Assistance] funds; US$16 million from private individual donations in the Buddhist communities; US$181 million may come from private capital; and the balance of US$395 million will have to come from Nepal government funding*" (Kwaak and ESPRI 2014: 41). Considering that reviews of the LMP implementation since 1978 have indicated that limited funds and resources have been a major challenge for its completion (Section 3.2), the high cost of the World Peace City project, which is seven times more than the current estimated total cost of the LMP, and the lack of secured funding would be likely to represent a major issue for its implementation.

While the World Peace City Master Plan advocates its development objectives as the necessary premise for "*peacekeeping, peacemaking and peacebuilding"* (Kwaak and Brenne 2002: 9), there are limited means to benchmark, monitor or evaluate whether it achieves its objectives. There is limited means of monitoring or evaluating the project impacts and whether it successfully addresses its peacekeeping, peacemaking and peacebuilding objectives through poverty alleviation and improving living standards in the rural villages around Lumbini, and through peaceful coexistence of global citizens (Kwaak and ESPRI 2014: 9). Ultimately, while the project has received some assistance from UNDP, it has raised concerns at UNESCO World Heritage Centre regarding its impact on the ancient archaeological heritage. The World Heritage Centre has requested the State Party to submit a detailed report on how this new development would affect the World Heritage property (WHC 2014; Government of Nepal 2015).

Overall, this new plan echoes the planning process of the 1970s, focusing on infrastructure development, without providing responses to the challenges that have been identified during the LMP implementation process. As summarised in a consultant's report, it fails to address the main issues at stake in Lumbini:

"*Considerable study was made to substantiate the necessity to review and update the Master Plan of Lumbini prepared by Prof. Kenzo Tange. It was found that, no new Master Plan is necessary, nor is there a need to make any changes in the original concept. The weakness was found not in the Master Plan, but rather in its weak implementation. 'LDT Act' is silent regarding its responsibility towards the adjoining VDCs and other Buddhist sites outside the Master Plan Complex*." (Nepal Consult 2010: 2).

By contrast, both the Lumbini IMF and the Buddhist Circuit projects have integrated more regional components which aim to reinforce the link between Lumbini development and regional social and economic development.

6.2.3. The Lumbini Integrated Management Framework

The IMF, informed by the research conducted by the UNESCO/JFIT project '*Strengthening the Conservation and Management of Lumbini, Phase 1*' (2010-2013), provides a new framework for the site management, including the definition of clear management structures and procedures and new objectives for the development of Lumbini to act as "*the catalyst for the sustainable development of the Historic Buddhist Region* [Greater Lumbini Area]" (Weise 2013: 7). The document was awaiting approval by the Government of Nepal at the time of submission and was therefore not operational.

The IMF was produced in order to respond to the current gaps in the management framework of the WHS. As was discussed in Chapter 3 (Section 3.2.1), there are currently two documents which define the objectives of the WHS management and the site manager's responsibilities: 1) the LMP which, as discussed in Section 2.4.3, is focused primarily on the physical planning and 2) the Lumbini Development Act which is the founding document for the site manager, the LDT, and defines the *raison-d'être* of the LDT as the completion of the LMP (see Appendix 18). Both documents therefore provide no management plan "*that combines general strategies and policies with specific goals that relate to the significance and setting of the site*" (UNESCO 2017: n.p.). The IMF aims to define the management framework and process for the WHS which integrates all institutional partners, including the definition of objectives and a broader strategy for the site development, beyond the completion of physical components within the LMP

Project Area. It also develops a management framework which defines the role of each institutional and international stakeholders and processes for decision-making and implementation of activities identified within the broader strategy. The IMF defines the vision and goal for the management of the site as follows:

"The primary objective of the Integrated Management Process of Lumbini, the Birthplace of the Lord Buddha is to protect the Outstanding Universal Value of the World Heritage property as well as to ensure that Lumbini becomes the catalyst for the sustainable development of the Historic Buddhist Region." (Weise 2013: 7).

Within this overall vision for the site development, the Plan identifies 13 objectives for the site management, including "*to identify means of ensuring the appropriate development of the Historic Buddhist region [Greater Lumbini Area] by prioritizing conservation […]; to facilitate strategies for poverty alleviation of the local communities and to develop tourism and pilgrimage by means of improving facilities, services, infrastructure of heritage sites in the Historic Buddhist region […]; and to establish coordination between all international partners, the national authorities and the site managers*" (ibid.: objectives 9, 10 and 12). The IMF is the first management document for Lumbini to integrate the sustainable social and economic development of the region as a management objective. The Plan also defines the interaction of different stakeholders and initiates pathways for consultation with institutional partners. The DoA represents the State Party while the LDT is recognised as the site manager for Lumbini WHS. Key ministries, departments and line agencies, including the Ministry of Culture, Tourism and Civil Aviation, the Ministry for Local Development (responsible for municipalities), the Department of Roads, Water and Sewage the Chief District Officer, Department of Tourism among others, are recognised in the Plan as associated authorities. As such, they are formally integrated in the consultation and conflict-resolution processes of the new management framework. Ultimately, the Plan includes the creation of a Secretariat managing "*all activities with international involvement*" (ibid.: 11) within the GLA to coordinate efforts for Lumbini and other sites' development in the region. These different layers of management provide the initial framework to establish consultation processes which currently do not exist between site managers and the local, national and international institutions. Moreover, the plan introduces the establishment of a documentation centre on the heritage of the GLA which among other purposes has the potential to act as a depository for data and evidence to monitor changes and evaluate the impact of current plans and developments on the protection of the local heritage but also on local communities (Weise 2013: 17).

While the IMF sets regional objectives for the site management, its scope remains limited and constrained by the current boundaries of the Lumbini WHS property and its buffer zone which only cover the Sacred Garden area within the water levee (UNESCO 2013: 134). The IMF offers a new platform for exchange between institutional partners to work towards the regional sustainable development of the GLA but does not in itself provide a strategy or pathway to integrate the site development within regional and local development plans. Moreover, as the IMF is produced for the World Heritage property, the integration is primarily done between site managers, international and national partners, with the Municipality and district administration being integrated as associated agencies in the consultation and conflict resolution process. Site managers' activities within the LMP continue to be almost solely focused on improving the visitor experience and ensuring the sustainability of the current visitor increase for the site protection and conservation.

Moreover, the IMF's function as a management document is to provide the parameters "*within which the 'Integrated Management Process' is implemented*" (Weise 2013: 1). These include the overall management objectives, the institutional and legal framework within which decisions should be made. It is within the integrated management process that strategies and actions are defined and implemented. Therefore, the IMF does not provide direct responses to issues related to social, cultural and economic integration of the site within the Municipality and the wider region. Moreover, questions related to data sharing, notably with local bodies, development of systematic approaches to monitor and evaluate on-going heritage activities, infrastructure development within the Master Plan and tourism in Lumbini Municipality remain unaddressed.

Interestingly, as discussed in Section 3.4.2, there is currently a gap that is emerging in terms of understanding of the social and economic impact of heritage on local communities between Lumbini and other sites within the GLA. Following the IMF's objectives, the second phase of the UNESCO/JFIT project has focused on sites within the GLA, especially the archaeological site of Tilaurakot-Kapilavastu, 27 kilometres to the west of Lumbini, associated with ancient Kapilavastu the childhood home of the Buddha. As part of the archaeological investigations, a research programme was started in 2014 to benchmark the social and economic impact of the heritage site and increasing pilgrimage and tourism activities on communities living around Tilaurakot-Kapilavastu (Coningham et al. 2017). After five seasons of data collection at the site, combining visitor, business and household surveys with participant observation and key informant interviews, the research programme has provided an insight into the social and economic impacts of pilgrimage, tourism and on-going heritage activities at Tilaurakot-

Kapilavastu on the local residents and communities living in the immediate vicinity (Lafortune-Bernard et al. 2018a). A recent review of the programme by the research team recommended additional data collection notably related to indirect impacts and broader economic and social links with local productions and cultures and opportunities (Lafortune-Bernard et al. 2018b). In comparison, there is no site manager or associated authorities in Lumbini collecting evidence on the impact of on-going activities and development that can be compared to the data collected at Tilaurakot-Kapilavastu.

Overall, the IMF is an important step towards improving the management processes in Lumbini which as we discussed in Chapter 3 (Section 3.2) has affected the LMP implementation, creating delays, and issues of continuity and accountability. It is also the first managerial document for Lumbini that defines local and regional development as an objective for the site management. The focus, however, remains on providing the setting for the site management, rather than actively addressing the current issues limiting economic and social impacts of the site development. Moreover, the framework remains unimplemented at the time of the thesis submission, awaiting adoption by the Government of Nepal. However, the regional strategy for sustainable development of the GLA has initiated new activities in the region, piloting monitoring and evaluation of the on-going heritage activities and tourism and pilgrimage development which may inform research, monitoring and evaluation procedures in Lumbini within future management plan processes.

6.2.4. The Buddhist Circuit and the Asian Development Bank and World Bank/International Finance Corporation's tourism infrastructure development projects

The ADB and WBG have had their own transborder projects focused on the regional Buddhist Circuit which stretches across the Indian states of Uttar Pradesh and Bihar and the Nepal's Western Tarai. The latter projects have included the development of tourism infrastructure within the circuit, notably in Lumbini and archaeological sites from the wider region. The WBG has had several projects in the region which relate to tourism, the main one being the 'Buddhist Circuit' transnational project including Indian sites and Lumbini led by the International Finance Corporation (IFC). In Nepal, the IFC activities have been primarily based on the provision of resources for planning, destination branding and promotion programmes. The IFC conducted studies in Lumbini (IFC 2012) and provided recommendations for tourism development. Consultants' reports discussed in Section 3.4 were funded by WBG to provide recommendations on the topics listed above. Other WBG projects related to Lumbini have included 'Nepal: Making markets work for the conflict affected in Nepal', focusing on handicraft production to empower

women and give them economic opportunities (WBG 2018). Ultimately, the WBG is also involved in the upgrading of the Narayanghat-Mugling road section (WBG 2015b) which is the main road connection from Kathmandu to Lumbini.

ADB is involved in Lumbini and the GLA primarily through the *South Asian Tourism Infrastructure Development Program* (SATIDP) and *South Asia Subregional Economic Cooperation* (SASEC). As part of SATIDP, the Nepal Government has received 12.75 million USD in grants and 27.75 million USD in loans for the completion of tourism projects, nearly all in or around Lumbini (ADB 2018a). In Lumbini, the project focuses on three components (ibid.: n.p.):

- "*Enhanced connectivity to Lumbini Development Area in Nepal*", focused primarily on the upgrading of Bhairahawa domestic airport
- "*Destination improvements to Lumbini Development Area in Nepal*", including the construction of the new Visitor Information Centre, and other facilities in and around the LMP, the procurement and supply of clean public transport (electric vehicles, etc.) and the funding for the design of a promotional plan (including consultancy fees, etc.)
- "*Enhanced capacity, increased community participation, and improved project management in Nepal*": this includes the funding of NGO-led tourism-based livelihood generation programme and training programmes.

The community participation and training components are a new addition from the LMP conception, preparation and early implementation phases and provide some measures to ensure that local communities can reap the full benefits from increased visitors. The ADB project has developed community participation programmes focusing on training and poverty alleviation through new livelihood opportunities. In Lumbini, the focus of these projects has been on training professionals in the hospitality sector, providing tour guide training and promoting local culture, through villages tours, crafts and homestays in Lumbini and the GLA. Among the planned activities, however, many have yet to be implemented (ADB 2018a). In Lumbini, the activities reflect the objectives and groundwork of the UNDP TRPAP project in the mid-1990s and 2000s. It is not clear how the issue of market linkage that the previous UNDP project has faced is tackled in on-going programmes. Recently, the Lumbini Tharu Museum founded as part of TRPAP activities, has recently reopened in the village of Sombarsi (former Khudabagar VDC), through the efforts of a local women's group and funding from the Municipality. The LDT also received funding to sponsor a homestay training programme to link the museum with homestay opportunities. But, the visit in January 2019 and informal discussions with the museum caretakers revealed that very few visitors come. The main issue

raised by the interviewees from the women and community group was that there is no resource or opportunities offered for promotion and linkages with the LMP and the local tourism sector. Cultural visitors who would form the main market for the museum have therefore no knowledge of the existence of the museum, and village tours or homestays opportunities. It suggests a current gap in measures and policies in terms of supporting programme participants beyond the lifespan of the funded project, notably in actively promoting the offer. By contrast, the visitor spending patterns have indicated that very few groups hire a local tour guide, despite the emphasis placed on the latter's training. These results suggest there is a need to better understand the demand and how to adapt the tour guide and other offers to increase their appeal to visitors.

ADB (2018b) has also invested in 2017 on roads improvement as part of SASEC, through a loan of 186.80 million USD. The SASEC Roads Improvement Project include both the upgrading of the East-West Highway (115 kilometres from Narayanghat to Butwal) which cuts across the Nepal Tarai and acts as the main connection between Kathmandu and India, and the Bhairahawa-Lumbini-Taulihawa road (45 kilometres), which was originally built as part of the LMP developments (Figure 6.2). The implementation of the main transportation infrastructure projects has suffered some significant delays: the initial contract for the airport upgrading

Figure 6.2 : On-going roadwork, funded by ADB through SASEC, on the Lumbini-Taulihawa stretch to extend the road from two to four-lanes
Photo: Author, January 2019

finished on 31st December 2017 but as of March 2018, only 36% of the physical infrastructure had been completed (ibid.).

The rationale behind these investments in tourism infrastructure and services has been partly supported by the preparatory assessments that were discussed in Chapter 3 (Section 3.4) on the economic and social benefits of tourism increase. The latter reports thus indicated that economic impacts from tourism development could represent a direct output at the lowest of 26.9 million and highest 50 million by 2020, and employment creation at the lowest of 18,863 and the highest 30,000 jobs (TRC 2013: 32). As discussed in Chapter 3 (Section 3.4), these estimations are based on very limited data from visitors and businesses and limited evidence from stakeholder interviews. Based on the publicly available documents on the WBG and ADB's online platforms, the monitoring and evaluation processes for the current investments do not and will not include a holistic evaluation of the social and economic impact of heritage, pilgrimage and tourism development in Lumbini and the GLA to confirm or challenge these assumptions. Rather, monitoring and evaluation procedures focus on the individual projects' objectives and targets. There is therefore currently no procedure or tool available to monitor whether these different investments will provide the expected returns at local or regional levels. In addition, these projects have collected limited information on the cultural and heritage impact of these new developments, especially on the protection of the WHS itself, the spirit of place of the Sacred Garden and protection of other sites within the GLA. In 2016, for example, there were concerns over the international flights' routes for take-off and landing which went over the Sacred Garden, so that flights coming and leaving the airport would be visible but also heard from the sacred site (Pandey 2016).

Both IFC/WBG and ADB now have environmental and social impact assessment, monitoring and evaluation procedures (ADB 2009a; WBG 2017: 9-10). The SASEC's Narayanghat-Butwal road improvement has been classified as a Category A project "*likely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented*" (ADB 2009a: 19; ADB 2016a: 11) while the other two projects, i.e. Bhairahawa-Lumbini-Taulihawa road and Bhairahawa Airport upgrade, have been considered as Category B (ADB 2013; ADB 2016b: 17), with less adverse and "*site-specific*" impacts and for which no in-depth Environmental Impact Assessment is required (ADB 2009a: 19). Although these interventions are complementary and geared towards similar objectives of facilitating access to the Western Tarai and Lumbini, the environmental and social impacts of each project have been evaluated individually and separately. Each evaluation has not considered the cumulative impacts of the projects on increasing air and road traffic, and therefore minimised some of the broader regional

environmental and social impacts, notably air quality pollution. For Bhairahawa Airport upgrade, for instance, the initial environmental examination concluded that "*air impact from pollution will be direct, of low significance, local and long-term for short periods only*" (ADB 2013: 31). This study did not consider the indirect impacts of the airport construction, notably on land traffic, itself increased by the major on-going road work. Moreover, the mitigation measures have been limited to site-specific measures, mainly the donation of electric or clean-energy rickshaws (ADB 2013: 23-4; ADB 2016b: 63).

Beyond the initial assessments that have underestimated some of the negative effects of the projects, notably the environmental impacts, there are also several limitations in the regular monitoring and implementation of the mitigation measures identified. As the borrower, the Government of Nepal must provide regular environmental and social impact monitoring reports to ADB (ADB 2009b: 26). The monitoring exercises are like the impact examinations and assessments project-specific, without considering impacts from other related-projects. They exclude, for instance, social impacts related to land acquisition for Bhairahawa Airport funded through non-ADB sources (ADB 2017: 10). The contractors are expected to undertake the defined mitigation measures against the threats identified, with the Government of Nepal monitoring their compliance (ADB 2009b: 26). In practice, however, the 2017 environmental monitoring report concluded that the compliance of the contractor had been weak, but the procedures to enforce it and correct it within the project framework were limited (ADB 2017a: 10). Similar problems have been seen with the social monitoring procedures. Local residents were promised compensation and training before their land was taken in "*life skill training programmes*" (ADB 2017b: 8-9), including in household finance management. In practice, in 2017, the social monitoring reports considered that these activities had been given low priority by implementing agencies and most families have not benefited from any training (ibid.). No corrective measures had been taken at the time of the last report in 2018 (ADB 2018c: 8-9).

Ultimately, the Air Quality Observatory installed recently by the International Centre for Integrated Mountain Development (ICIMOD) in Lumbini has produced new results that were not available at the time of the environmental impact assessments and design of the projects indicating extremely high levels of air pollution In Lumbini due to a variety of factors (Rupakheti et al. 2017). However, this new data and information has not contributed to any re-assessment of the environmental and social impacts of on-going projects, including the increased air and road traffic and the consequences on already high air and water pollution in the area.

6.2.5. Towards effective policies and bridging the data gap?

This review of the main on-going developments and future plans for Lumbini points out a series of challenges and issues which affect the planning process within the transitional phase from the completion of the LMP to the post-LMP era. One of the main challenges is the lack of coordination between the different stakeholders and partners which encourages the multiplication of separate projects and therefore the loss of a single cohesive vision for the site development which the LMP maintained to a large extent over 40 years. The lack of coordination also prevents the adoption of a more holistic approach to the evaluation of the social, economic, environmental and cultural impacts of current tourism/heritage-based development projects. The full extent of the data available is as a result often unknown, especially from local and district administrative offices, while the data collected is often too limited or focused on funders' specific set objectives to provide an overall understanding of the impacts of current projects, on-going and future developments. None of the projects have provided responses to the existing data gaps.

The thesis proposed an initial analytical framework, with 10 economic and social indicators to evaluate more broadly social and economic impacts of heritage and tourism interventions: 1) Visitor expenditures, 2) Business creation, 3) Income generated by the tourism sector, 4) Government and private sector funding and local tax revenues, 5) Total employment, 6) Livelihood opportunities for women 7) Income poverty reduction, among marginalised groups 8) Education, 9) Public Infrastructure and 10) Cultural and religious participation. In addition, growing concerns over the sustainability of on-going tourism development in the GLA and the environmental cost of tourism infrastructure projects should be integrated in future monitoring and evaluations. The recent development of environmental monitoring and new data availability now provides robust evidence to monitor and evaluate trends and link them with heritage and tourism-related development.

The review also indicates that the current lack of evidence regarding the social and economic impact of heritage, pilgrimage and tourism affects the planning process. In terms of sustainable destination development and heritage preservation, the lack of monitoring of urban and tourism business growth in Lumbini is particularly problematic. The opening dates of businesses since 2007 have suggested that the number of businesses has grown annually by an estimated average of 45%, from 10 to over 50 in 2017 (see Figure 5.20). With a predicted increase of visitor numbers from 1.5 million in 2017 to 3.4 million by 2025, notably driven by the completion of the international airport in Bhairahawa, an unparalleled growth in the number of tourism

businesses can also be expected. The latter will have significant consequences on the LMP immediate surrounding and the wider region. Moreover, while the thesis' framework did not address issues of environmental threats, mainly due to the non-existence of monitoring systems and data until recently (Section 4.1.1), the impact of on-going developments on these issues is expected to be extremely significant. At present, monitoring and evaluation procedures, along with effective responses to rapid deterioration are not addressed in any plans. Current measures are limited primarily to providing clean energy vehicles within the LMP area (ADB 2013, 2016b). Recent evidence from ICIMOD's Air Quality Observatory in Lumbini emphasizes the already high level of air pollution, particularly before the monsoon, with significant risks for health, the local environment and ecosystem and the tangible heritage (Rupakheti et al. 2017).

While some of the current plans have developed more inclusive approaches to integrating regional objectives and local and regional actors, the monitoring and evaluation of local social and economic impacts is not a focus of any of the plans put forward. One of the main consequences is that many of the issues related to local participation and market leakages identified in this thesis using rapid assessment methods in Lumbini are only partially, or not at all, addressed in the current plans. The IMF and the Buddhist Circuit projects respond to a certain extent to leakages related to the short length of stay of visitors, through investment and development of other sites in the GLA. There has been significant investment on connectivity, notably road construction and investment in clean energy vehicles, but also on presentation and promotion of the sites, with interpretation boards, leaflets and brochures produced by various organisations. The visitor survey results have emphasized the strong correlation between length of stay and increased visitor spending. Visiting other sites is currently an important determinant of total visitor spending. However, the results have also suggested that other factors have significant weight on spending patterns of groups visiting other sites in the GLA and affect both total spending but also expenses in nearly all sectors, including accommodation, transportation and shopping. While specific determinants could not be statistically determined from the visitor survey results, they suggest that developing the other archaeological sites alone may not be sufficient to minimise existing market leakages.

6.3. Wider implications of the evidence from Lumbini for heritage-based development policies, site management and community participation

6.3.1. Introduction

Through all the stages of conception, preparation and implementation of the LMP but also across the indicators and impacts studied within the analytical framework of the thesis, the isolation of the project from its surrounding communities and from local and regional

stakeholders emerges as a central factor in determining economic and social impacts. From the conception of the project, driven most notably by the UN, onto the design and implementation phases, the integration of local communities and stakeholders in the policies and management processes has been marginal. As discussed in Chapter 2 (Section 2.2.2-3), the LMP is not unique and further integration of heritage and tourism projects within regional and local projects and networks has been advocated since the late 1970s. More recently, increased community engagement in the management and decision-making processes has become a central consideration. However, the implementation of these policies has often been found to be more challenging. For instance, Weerasinghe and Schmidt (2017: 25-6) commented on Sigiriya WHS, one of the most visited sites within the Sri Lankan Cultural Triangle, that "*specific plans to link surrounding communities and their economic aspirations, as well as their heritage traditions, with Sigiriya WHS have long been forgotten, at a significant cost*".

Closer to Lumbini and within the Buddhist Circuit, Bodh Gaya in India is another site where a similar physical separation and distancing between the WHS and its surroundings is evoked in recent research (Geary 2018; Rodriguez 2017). In Champaner-Pavagadh WHS, in Gujarat (India), the distancing from local communities is less based on spatial factors but has been recognised between resident communities, the site and the management (Krishnan et al. in prep). Most recent studies, including the ones cited above, have been primarily based on qualitative research, interviews with local residents and observations of the current dynamics in and around these sites. The evidence from Lumbini provides findings to support and compare similar processes of isolation and alienation, but also new evidence on their repercussions for generating local social and economic impacts. Notably the thesis provides quantitative evidence to discuss in more depth the cost(s) of this isolation, including missed opportunities to capitalise on the potential widespread social benefits of heritage and tourism recorded and identified at other sites, but also the economic losses and/or negative repercussions arising from this isolation.

Therefore, the findings from Lumbini have wider significance for the management and evaluation of the local economic and social impacts of heritage, and related policies and interventions. Using Lumbini as an example, the thesis contributes to the existing literature by discussing some of the dynamics and processes which affect the social and economic impacts of heritage and tourism and their contributions to local development. The study provides another perspective on the nature of market leakages at the local level, based on both quantitative and qualitative evidence. The results of the business survey, moreover, offer a platform and new evidence to discuss local participation and the benefits of heritage and tourism for marginalised

communities. By combining the current evidence with a review of the long-term site development and management until present, the research offers a reflection on the role of planning and management at different level in generating or limiting economic and social benefits. The implementation of Lumbini in isolation from local and regional development plans, for instance, has strongly affected at every stages of the site development the expected benefits from the project.

Ultimately, from the research process has emerged a reflection that touches beyond the initial thesis objectives on the close ties between impact evaluation and community engagement, notably in terms of delivering changes. The latter draws from ethical and practical paradigms in archaeology, heritage management and academic research. This discussion builds on pilot projects that the author has been involved in and which informed but also were informed by the thesis research, linking them with the existing literature.

6.3.2. The Lumbini Master Plan: heritage, isolation and alienation

In understanding the impact of the LMP on local communities, McKercher et al.'s (2015) discussion on the concept of place in tourism destinations provides a valuable insight into the process of change induced by tourism development and how it affects social impacts. Place is characterised by its dual nature of being associated to a geographic entity but also to socially constructed meanings and social functions (Tuan 1975: 164-5). The authors identify three types of places within a tourism destination: 1) tourist place, 2) non-tourist place and 3) shared place, differentiated through clear markers, specific rules and functions for tourists and local residents. They are also associated with different social and economic impacts (ibid.: 58). The balance between the three types of places changes within the lifecycle of a destination and its development, affecting perceived and measurable social impacts and renegotiating dynamics in and between the different places (Butler 1980; McKercher et al. 2015; Almeida Garcia et al. 2015: 36).

Applying this model to Lumbini provides a different perspective on the role that place and spatial division in Lumbini has played in generating positive change and more negative social impacts. More specifically, the types 1 and 3, i.e. tourism place and shared place, have particular relevance in the context of Lumbini development. The former is primarily for tourists' use, "*either constructed or signified for and by tourists*" (McKercher et al. 2015: 55). The latter is defined as a "*hybrid place suitable for both tourists and locals*" (ibid.). The LMP Project Area fits within the former definition of tourism place, as an area that was primarily created as a distinctive space designed for visitors and conceptualising their experience. At its centre,

however, the archaeological site is a shared place where both local residents and tourists interact. The LMP thus generated a transformation from a primarily local site, with few pilgrims, to a place increasingly designed for tourists and pilgrims with subsequent renegotiation of the place, its markers, social functions and rules. While not specifically discussed in McKercher et al.'s (2015) paper, at a heritage site this dynamic is linked to a process of renegotiation over time of the local values and uses of the site due to the process of tourism place-making. Imbalance in the development of this shared place can thus lead to a process of isolation and alienation of the site from its local communities.

Another insight suggested by this differentiation of place in a tourist destination is the role of shared places. The latter tend to be recognised as the areas where most beneficial impacts are generated (McKercher et al. 2015: 58). In Lumbini, these places remain rare, limited to the Sacred Garden, Mahilwar New Bazaar and Parsa Chowk (Figure 3.4). As a result, the place divide in Lumbini is marked by a stronger dual dynamic between tourist and non-tourist places, notably reinforced by the wall that separates the LMP Project Area from the surrounding Municipality.

More broadly, the physical isolation of heritage from surrounding communities has often been seen as the most effective protective measure to preserve sites from damage caused by modern development, urban growth and exposure to various intrusive activities, affecting the architectural and archaeological remains and/or the visitor experience. Indeed, the rapid degradation of major archaeological sites like Bhitagarh, in Bangladesh, or Sisupalgarh in Odisha, India, reflects the challenges of balancing residents' needs with site protection (Husne Jahan 2019; Borchert and Yule 2005; Mohanty 2018). For management purposes, the isolation therefore facilitates regulation and control over infrastructure development, number of people and activities undertaken within the sites but also income generation through entrance fees, for example.

As a result, land acquisitions and the physical isolation of heritage are still widely used measures, but often generate tensions between managers and local communities and stakeholders. In 2007 in Bodh Gaya, for instance, the implementation of the site new Master Plan involved forced demolition of shops and removal of street vendors based on government land in a process of "*cleaning up*" the site and the city (Rodriguez 2017). At many archaeological sites in the GLA, fences have been built to control access, activities and development within protected areas. More recently, in 2017 at the site of Kudan, a fence was built between the site and the village, to prevent grazing, driving and other damaging activity to the heritage, but also incidentally causing accessibility issues to two local shrines located within the site (Lewer et al.

2019). In a different context, in Kathmandu, the temporary fences that have been built by the Metropolitan Municipality around the Kasthamandap after the collapse of the superstructure during the 2015 earthquakes have been loudly criticised by local groups (Risal 2016; Pradhananga 2017).

The physical isolation of heritage therefore has social, cultural and economic costs. Many are widely acknowledged, but finding effective responses is still a challenge, partly because their roots and the dynamics at play are often not well known. McKercher et al.'s (2015) discussion on the links between place change, redefinition of social functions and impact, in different phases of a tourist destination development, has provided interesting parallels to these dynamics at heritage sites. They have argued that periods of rapid growth, when the boundaries of these places and the equilibrium between them were redefined, were critical periods when a sense of alienation could develop (ibid.: 63). Most cases mentioned above for instance have been at this critical stage of renegotiation of places from non-tourism to shared or tourism places. The results of the thesis' research in Lumbini provide a more long-term perspective to analyse the reconfiguration of these different places over time and how the LMP implementation has contributed in redefining them, their meaning and social functions.

In Lumbini, the land acquisition, in the late 1970s and 1980s, and the wall built later around the one by three miles Project Area spatially divided the site and the surrounding villages and communities. While families were financially compensated, the review of the site development has indicated that the land acquisition contributed to increase tensions between local residents and site managers, removed any residential, agricultural or producing activities within the LMP boundaries, and affected community bonds and units existing between and within each village (Sections 3.3.2-3). All these have represented significant social and economic losses for resident communities, including the opportunity costs for the main local and regional production sectors, agriculture and farming, but also industries and factories which have also been prohibited in the wider five by five miles restricted buffer zone. Land acquisition has also had significant and widespread impacts on local values and uses associated with the site. While largely unrecorded and visible mainly through indirect evidence, the impact of the resettlement of the nearest villages on local religious practices associated with the archaeological site has been substantial (Sections 4.3.3-4.4.2). Although local festivals still take place within the site and special rituals are still performed, the site is no longer a place of daily worship for local communities (Figure 6.3). The progressive and unrecorded loss of knowledge about the local deity Rummindei/ Rupa

Devi and associated ritual practices, can be associated with the increased distance from the community that the goddess and the practices were associated with.

Figure 6.3 : Local ritual practices associated with Lumbini Sacred Garden, including:
Figure 6.3a (above): Local women making offerings at the Asokan Pillar (Photo: Author, February 2018)
Figure 6.3b (below): Evidence of ritual feast offering at the base of the monument (Photo: Author, February 2018)

Across the wider GLA region, today, there are many similar local deities and religious practices associated with archaeological sites that remain largely unknown but are likely to be affected by future development (Figure 6.4). Among them is the goddess Samai Mai whose shrines are attested at sites like Tilaurakot-Kapilavastu, Dohani, Chatradei, Sisaniya or Niglihawa. At each site, the goddess is associated with a rich oral tradition and local stories, and various ritual practices and local festivals. Samai Mai is an interesting comparison with Rummindei/ Rupa Devi in Lumbini because already the former has also begun to be associated with Maya Devi, the Buddha's mother. While Rummindei/ Rupa Devi in Lumbini is often undissociated from the latter, in Tilaurakot-Kapilavastu, it is the Samai Mai temple that is at present linked with the Buddha's mother. Some local residents notably say in interviews or to visitors that Maya Devi used to worship the goddess at the temple herself. There seems to be therefore a spontaneous local dynamic among the nearby communities of linking the current "*Buddhist place-making*" (Rodriguez 2017: 60) process currently taking place in Tilaurakot-Kapilavastu as the childhood home of the Buddha, with local religious traditions and practices. The Samai Mai example therefore indicates that, beyond the physical isolation, other factors influence the changes that site development induces on local heritage values and uses.

F**igure 6.4 : Local shrines and deities at other archaeological sites in the GLA, including:**
F**igure 6.4a : Samai Mai shrine at Sisaniya** (Photo: Author, January 2017)

Figure 6.4b : the Samai Mai temple at Tilaurakot-Kapilavastu (Photo: Author, February 2016)

Figure 6.4c : A Shiva lingua in Kudan (Photo: Author, February 2016)

Figure 6.4d : Local shrine dedicated to Koti Mai in Karma (Photo: Author, February 2018)

In Lumbini, the review of site development in Chapter 3 (Section 3.2) has indicated that the physical isolation has been combined with an isolation at the administrative and management level which has contributed to the changes observed since the conception and implementation of the LMP. The LDT mission and *raison d'être* defined by the 1985 Lumbini Development Act has been the completion of the LMP and its physical components (see Appendix 18). Its management structure, divisions, budget and programmes therefore have reflected the different activities needed to manage and complete the infrastructure development, but not activities related to strengthening links with the wider local or regional partners and local development. At present, there is therefore still no defined space within the management structure for formalised interaction and consultation with local and regional stakeholders, including administrative offices, NGOs, community groups or representatives of tourism businesses. There is also no community relation or social mobilisation position, including school or education activities, within the LDT and therefore no annual budget or human resources dedicated to the organisation of educational, social programmes or local stakeholder consultation processes.

Past and current initiatives towards local communities have been primarily dependent on external funding, from international agencies, UNDP, ADB or INGOs, NGOs and CBOs. Beyond

the management framework and structure, the low representation of local stakeholders within both permanent staff and officers but also in key decision-making positions, including boards and Council members has also contributed to distancing the site management from the local communities during the LMP implementation period (Sections 3.2.1. and 4.4.1.). All these factors have prevented an outward dynamic from the site and its management towards engaging local communities and limited options for engaging and providing effective responses to local issues, including those linked to the site development and to market leakages.

Moreover, as the site development has induced change and increased control over the heritage site, its presentation and activities within it, the distance between site management and local residents has contributed to alienate local communities and culture from the Sacred Garden. It is reflected notably in the presentation of the site and the interpretation provided for visitors which focus on the ancient past and Buddhist periods with no or little mention of the site's more modern history before and beyond the LMP. Most interpretation material currently ends the ancient historical narrative in the fourteenth century while the modern history focuses on the site's archaeological rediscovery in 1896 and the LMP, with limited mention of the connections with local communities. This omission is visible in both the limited on-site interpretation, which does not refer to secular settlements, both the Ancient Village Mound and the modern villages, nor to current local communities and the regional context, and in publications for the general public and more specialised audiences (LDT 2019; Bidari 2004, 2007; UNESCO 2013).

For instance, the 2013 UNESCO publication, *The Sacred Garden of Lumbini: Perceptions of Buddha's Birthplace*, identified eight layers of understanding of the site, including historical, archaeological, Buddhist, environmental or tourist/pilgrim perceptions. None, however, specifically includes Lumbini communities nor their perceptions and uses of the Sacred Garden. Considering that this publication has formed part of the preparation of the IMF, this absence in this particular case has repercussions on the management of the site and its future directions. Combined with regulations like the ban of certain local ritual practices that are more difficult to balance with the needs of other visitors and pilgrims, like ritual cooking and feasting, the absence of local resident communities, their perception of the Sacred Garden and religious practices, in the site presentation and interpretation results in the local rituals and local presence, today and in the past, being almost invisible within the site.

The evidence from Lumbini finds many parallels with reflections from research undertaken on the reinvention of Buddhist India (Huber 2008), for example in conservation, management and ritual practices in Bodh Gaya (Rodriguez 2017; Ray 2012; Nugteren 2014: 208) and on processes

of isolation and alienation at other South Asian and WHS, including Sigiriya that was referred to in this section introduction (Weerasinghe and Schmidt 2017; Bushell and Staiff 2012). Beyond these issues which closely link to questions of balancing local and global values, and the rights of local communities and indigenous groups, the thesis' review of Lumbini development combined with the primary and secondary data collected indicates that the site isolation and alienation of its immediate surroundings has consequences on the social and economic impacts that the site development and tourism have generated and on the site managers' capacity to address existing shortcomings. This isolation has contributed to minimising positive social impacts from the site development but also had particularly significant economic costs in relation to existing market leakages, undermining recent efforts to address them and develop local linkages.

6.3.3. The cost(s) of isolation

There is a certain consensus on a few widely recognised benefits of site development for local communities which include the new income generated in the local area from investments and visitors coming to the site, new job opportunities, notably beyond the traditional sectors, and the creation of new businesses. However, the literature is visibly less homogenous for other impacts associated with heritage and the understanding of how they are generated (Section 4.2.1). In the literature, among the most widely mentioned role of heritage and tourism are improvement in living conditions induced by the new economic prospects mentioned above but also by public infrastructure and services development, poverty alleviation, education, capacity, identity and community building at different levels (local, regional, national) (CHCfE 2015; Dumcke and Gnedovsky 2013; El Beyrouthi and Tessler 2013; UNESCO and OVPM 2012).

Moreover, WHS, international tourism and cultural tourism organisations all have in common a goal towards generating cultural exchanges, sharing knowledge and heritage to foster inter and intra-community dialogues (Cousin 2006, 2008; Picard 1992; Robinson 2001). However, evidence from WHS and sites across South Asia do not always identify these benefits and sometimes identify more negative dynamics associated with some of these social dimensions (Hampton 2005; Cleere 2011: 522; Jimura 2010; Affolder 2007). The evidence from Lumbini indicates significant missed opportunities from the site development and management to build on the wider values and impacts associated with heritage and tourism linked to the site isolation and originating from the processes discussed in the previous section.

The disengagement with these broader social opportunities in Lumbini is illustrated by the results of the analytical framework's social impact indicators and the direct social impacts that

could be associated with the site (Section 4.3.2). The two regional components, the Bhairahawa-Lumbini-Taulihawa road and the Bhairahawa domestic airport, have improved connectivity and travel times to larger markets and regional hospitals. However, the direct social contribution to this day in education (Indicator 2.1) and/or public infrastructure development (Indicator 2.2) for surrounding villages is marginal. External locally-based initiatives to respond to local needs for education, infrastructure and health have received no or limited support from heritage and tourism policies (Section 4.4.2). This has limited the connectivity of NGO and INGO social projects and programmes with the LMP development and therefore the contribution that the site development could have made to education and well-being.

The site management objectives, structure and resources have all restricted the LDT involvement in community engagement primarily to short or mid-term interventions based around project-specific activities with external funding sources. In the absence of management objectives and permanent resources dealing with these activities internally and limited cooperation with local or regional administrations, these projects have not been integrated within any long-term management strategies which has affected the continuity, transparency, but also monitoring and evaluation of the latter projects, notably in terms of their social and economic impacts for the beneficiaries (Jamieson and Morris 2007: 27-8; Loch and Kavadias 2007: 225-6). It has created "*white spaces*" between an increasing number of projects (Matta and Ashkenas 2003: 109), within which the possible opportunities but also risks, notably related to the phasing out of the different projects and continuity post-funding period, have not been addressed (Mikkelsen 2005: 38-9; Ika 2012).

In comparison with Lumbini, Chitwan National Park World Heritage Site has gone through major changes in its management since its creation in 1973 (Chitwan National Park Office 2015: 10-20). While the land acquisition process finds many similarities with Lumbini (see the discussion in Section 2.2), the park has progressively integrated community engagement and conflict resolution processes within its management procedures, framework and activities. The buffer zone has played a critical role in this process, with the park management initiating community forest management systems, along with other people-park and grass-cutting programmes, involving communities within this area (Straede and Helles 2000; Nepal and Weber 1995; Spiteri and Nepal 2008). All the activities have primarily focused on meeting subsistence needs of local communities and reducing risks to human life from rhinos, elephants and other protected animals. The role of the buffer zone in Chitwan finds parallel in McKercher et al.'s (2015) discussion of shared places as areas where most beneficial impacts are identified. However, few such places are found within the LMP and the Lumbini Cultural Municipality.

Moreover, Chitwan National Park management plans, updated every five years, since 2001, have also been critical in linking these initiatives to the site management framework and processes (Chitwan National Park Office 2015). The objectives and lessons-learnt from these experiences have thus fed into the preparation of the following site management plan. While human-wildlife-site management conflicts have not been eradicated, there have been positive developments in local livelihood, environmental conservation and improvements in the relations between site managers and local communities. In Lumbini, there had been no review of site management processes until the IMF in 2013, and consequently, the translation of individual projects and programmes' achievements within the formal, permanent management processes has not taken place.

The disengagement with local culture, including the site physical isolation but also the absence of inwards and outwards linkages with the area outside the LMP, and the invisibility of local practices on site limit the cultural exchanges and intra-community dialogues that international organisations consider at the core of sustainable international tourism and the WH Convention (UNESCO 1997: 7; UNWTO 2018; European Commission 2018: 1). More broadly, the research in Lumbini provides an insight into how the disengagement with local communities and culture has undermined the economic impacts, notably through the links with market leakages, and limited the site managers' and stakeholders' capacity to respond to existing challenges. The thesis provides certain elements of response which indicate how the isolation and alienation of local culture within the site and the LMP has affected the success of recent initiatives to reduce leakages and strengthen local linkages, starting notably with the UNDP's TRPAP project, in the 1990s and 2000s.

At the local Municipality level, the thesis findings suggest that, while visitors contribute to the local economy, there are significant leakages that undermine benefits for local communities. Indirect leakages are significant and notably linked to the poor linkages between the tourism sector and the local supply chain and supporting sectors, notably agriculture, farming and construction. More importantly in the case of Lumbini, direct leakages from the share of visitor spending done outside the local destination are widespread and affect all tourism businesses, from accommodation, catering, transportation, wholesale and retail and tourism services. The findings reinforce the importance of length of stay of visitors which has repercussion much more broadly than solely on accommodation and catering, but also on all visitor expenses. Increasing length of stay has been a prime goal of many recent and current initiatives in Lumbini, including the development of the GLA but also the TRPAP project activities.

The results from the thesis suggest that the former strategy would indeed increase length of stay and spending in Lumbini. The correlations between increasing the number of sites visited, increasing length of stay and increasing total visitor spending are all significant. The number of sites visited is closely and positively correlated with length of stay and with total visitor spending. These results indicate that an increase in the number of sites visited in the GLA, but also more broadly in Nepal, would result in additional time and expenses spent in Lumbini. However, an increase in the number of sites visited did not systematically coincide with an increase in the mean spending of groups, in total but also by type of expenses, including accommodation, shopping, transportation or catering. The correlation therefore seems to mask to some extent other dynamics which currently limit the impact of site visits on visitor spending.

These observations have important implications for Lumbini development but also for the development of a wider circuit aiming to generate regional economic and social impacts. It suggests that not all sectors automatically benefit to the same extent from increasing the number of sites visited, including in the case of Lumbini, wholesale and retail but also at present transportation. Groups visiting other sites within the GLA currently tend to be large organised tours with their own private vehicle spending very little time at each site, staying less than one hour in the second most visited site, Tilaurakot-Kapilavastu, and heading back to Lumbini or across the Indian border. Their economic impact on local communities at each site is marginal, but also it limits the increase in length of stay generated and does not necessarily guarantee that people will spend more on accommodation, transport, catering and shopping. Therefore, the promotion of the archaeological sites and development of basic visitor facilities, like car parks, public toilets, is not sufficient to reap the full benefit of visitors going to other sites but should come with the development of the wider offer as well. A comparative study undertaken between similar heritage cities, Safranbolu WHS and Beypazari, in Turkey have indeed highlighted that the latter, by diversifying its tourism offer, promoting local crafts, exploiting its natural resources and integrating heritage policies within local development strategies, had had more significant economic and social impact locally than the former, despite Safranbolu WHS having a higher number of international visitors (Nicot and Ozdirlik 2008: 13-5).

The UNDP TRPAP's strategy of developing the local offer therefore should have provided a complementary response to address the current existing leakages. During the project, to diversify the local offer and extend visitors' length of stay, TRPAP developed village tours targeted at the small niche of high-spending international cultural visitors and bird-watchers coming to Lumbini and including key villages, local museums and local points of interests (Figure 6.5-6.7). Along these routes, were developed production centres, traditional tea and food places

Figure 6.5 : Tharu handicraft production centre in Mahilwar village, with:
Figure 6.5a (left) : the centre which is now closed and used for storage of agricultural products (Photo: Author, March 2017)
Figure 6.5b (right) : Interview with one of the members of the women's group (Photo: Author, March 2017)

Figure 6.6 : Tharu Museum in Sombarsi with:
Figure 6.6a (left) : the museum during the first visit when it was closed (Photo: Author, March 2017)
Figure 6.6b (top right) : the museum during the second visit after its reopening (Photo: Author, January 2019)
Figure 6.7c (bottom right) : the new collection, including traditional silver jewellery, textile and traditional clothes, ceramic items and other daily life objects (Photo: Author, January 2019)

Figure 6.7 : Sculpture production centre in Khungai (Bhagwanpur) with:
Figure 6.7a (left) : the production centre, still used by one member of the group formed by the UNDP TRPAP project. He primarily makes figurines and sculptures for local Hindu shrines (Photo: Author, March 2017)
Figure 6.7b (right) : clay figurines made by the centre's sculptor in a local Hindu shrine (Photo: Author, March 2017)

and cultural shows, with local dance groups. However, all these initiatives have afterwards struggled to find a market and nearly all of them were inactive by early 2017, when the author revisited them. Based on the final TRPAP evaluation report, nearly all the objectives related to establishing linkages with relevant administrations and the private sector had not been attained by the end of the project (Bhattarai et al. 2006: 27). The factors that were identified after TRPAP completion included issues with the items made in the production centres which were not adapted to the existing demand while the poor promotion of the local crafts that were not advertised as traditional and/or local productions in the souvenir shops was also an important factor.

This thesis has identified further issues that explain the challenges faced by the TRPAP projects to reach its 'pro-poor, pro-women' objectives. An interview with one of the TRPAP participants mentioned that, once the project's social mobilisers stopped bringing visitors to the production centres, groups stopped coming and no local organisation continued to support their activities. This is where the absence of outward dynamics from the site and its management towards local communities, local culture and local stakeholders, including local and regional administrations, INGOs and NGOs, appears to weigh in the balance. The absence of internal budget or responsibility within LDT to take over and the limited resources and influence of the various VDCs within the LMP has a created a gap, notably for the promotion of these initiatives where the visitors are, in the LMP Project Area. Therefore, the efforts that would have been required to continue the necessary promotion and activities to support the emerging linkages were not continued.

The promotion was left to the goodwill of local private business owners, shops and hotel owners. Some creative initiatives have come from a few local guest house owners, belonging to the local hotel association, notably promoting and organising village tours for their customers or promoting new ways of visiting Lumbini and the surrounding area, with bicycles or scooters. However, as mentioned above, in the souvenir shops, the products were not promoted as locally-made or traditional handicraft (Figure 6.8). This challenge is partly due to the geographical distance between production centres and the Project Area and the lack of direct interaction of individual producers with the visitors. However, the ownership and employment patterns, identified through the tourism business survey, suggest a wider factor linked to the limited connections that the producers' communities, based on ethnicity, caste and gender, have had within the tourism sector itself. As the survey indicated, marginalised communities and groups are less represented in tourism business ownership and, while more represented in employment, they are most likely in lower wages positions rather than managerial positions and/or jobs in direct contact with the visitors. Ultimately, the limited linkages and connections between producers, retailers and visitors thus affect the promotion and visibility of local crafts in the tourism offer.

Figure 6.8 : Locally-made souvenirs developed as part of UNDP TRPAP, given by one of the retailers in the Cultural Zone. The shops had stopped selling them by the time of the author's visit in 2017.
(Photo: Author, March 2017)

The findings echo very closely previous research on tourism, souvenirs, handicraft, authenticity and motives for buying handicraft (Jin et al. 2017; Swanson and Timothy 2012; Littrel et al. 1993; Cohen 1988). Previous studies have indicated that the perception of handicraft and their purchase is closely driven by the characteristics of the demand, i.e. the visitor (Hu and Yu 2007; Anderson and Littrel 1995; Park and Reisinger 2009), but also significantly by the offer and its presentation (Littrel et al. 1993; Trinh et al. 2014; Esperanza 2008). From an offer perspective, among the main drivers for purchasing handicrafts are factors linked to how the visitor connects the object with traditional craftmanship, with the artisan and his work, and generally with a perceived authenticity of the product in the material used, its form and colours and its representation of a local community (Revilla and Dodd 2003: 97; Littrel et al. 1993: 203; Swanson and Timothy 2012: 492; Tosun et al. 2007: 88-89).

The disconnection or lack of linkages with producers affects the promotion and commercialisation of local handicraft as souvenirs. Tourism research indicates that the shopping experience, and assumedly the sales, are enhanced by the visitors' personal contact and connection with the artisan or by a setting that they consider authentic, like a workshop (Brida et al. 2013; Yu and Littrel 2003: 142). Moreover, the literature also points out that in a context of increasing "*hidden hands*" (Esperanza 2008: 91) of middle-men and retailers, the producers can often lose agency over the way their craft is represented and marketed to visitors but also over the share of the sales' benefits. By contrast, there are also evidence that the retailer, especially when they relate to the craft or heritage commercialised and identify it as theirs, can enhance the shopping experience and sales through his/her own renegotiating of its authenticity (Trinh et al. 2014: 282). The UNDP TRPAP programme, by linking crafts with village tours and the visit of production centres, created this connection during the duration of the project but the link was not maintained after its completion.

More broadly, drivers for purchasing handicraft are closely linked with how the visitor relates the object or product to his travelling experience and his/her perception of the local history, heritage and culture (Littrel et al. 1993: 205; Hu and Yu 2007: 1085). Wong and Cheng's (2014) research in particular highlighted the strong links between the heritage site image and visitor souvenir shopping attitudes. Their research indicates that the attributes associated with a heritage site affect visitor attitudes towards souvenir shopping (ibid.: 488). At present, however, most visitors in Lumbini have little prior knowledge of local or regional culture, food, handicraft, traditions, religious practices, history. Their exposure and interaction with the local culture during their visit is also limited by the processes which have isolated and alienated the

site from the local communities. Not only is the time-spent by visitors in Lumbini short, it tends to be confined within the LMP, more specifically the Sacred Garden and the Monastic Zone.

For organised tour groups and other visitors staying overnight within the LMP Project Area, notably in the Monastic Zone, there can be no contact with local businesses and local communities that are located outside and limited interaction with those in the Cultural Zone. With 38% of overnight visitors staying in a monastery, it represents a significant portion of longer-staying and overall higher-spending visitors. With visitors staying outside the LMP in hotels and guest houses, the interaction is limited to the main road and the New Lumbini Bazaar, where the restaurants, shops, travel agencies, hotels and guest houses are located. Visitors can come to Lumbini without having any exposure and interaction with the local culture. The result is that many of them do not relate local handicraft to their travelling experience and perception of the local history, heritage and culture. While it is difficult to quantify its impact, the limited exposure to local communities, their history, heritage and culture in Lumbini certainly affects visitors' shopping attitude and therefore their propensity to buy local handicraft.

Visitor spending on souvenirs but also on local food, entertainment and activities and services require "*immergence into the community through conversation with local residents, participation in community festivals, and visitation of art galleries, museums, and theaters*" (Swanson and Horridge 2004: 373). All the key driving factors for selling handicraft, including a personal connection with the producer, but also cultural interactions with the host community, are missing in Lumbini but also more broadly in the GLA and undermine the efforts of various tourism initiatives to commercialise and commodify local production and craft. Moreover, the target groups for these interventions have tended to be marginalised communities, women, indigenous groups and the poor, who are both under-represented in the tourism sector, increasing the gap between their offer and the demand, but also within local administrations (Lawoti 2013: 198-9; Pradhan 2004: 69; Guneratne 2002: 193). They tend to be less literate of administrative procedures, making it more difficult for them to access other possible support schemes from other development or business offices after the project completion. These combined factors undermine efforts to empower marginalised groups through the commercialisation of their handicraft, with more significant challenges for participants to continue their activity beyond the lifespan of the projects.

A similar process can be seen at the site of Tilaurakot-Kapilavastu related to the handicraft stall that opened in February 2016 (Figure 6.9). While during the lifespan of the project, the Tharu *Hariyali Hastakala* women group making the handicraft were able to participate in fairs across the country and had agreements with retailers in Butwal and in Tilaurakot-Kapilavastu (Gauli 2016: 13; Yadav 2016), these linkages have been fading since the completion of the project later in 2016, and the women have been struggling to continue to raise their own personal income from their handicraft production. One of the objectives of the project was to register the women's group with the District Cottage and Small Industry Office, but this was not completed by the end of the project and the women now lack the knowledge of administrative procedures and expertise and capacity to travel to administrative offices to finalise the application dossier (pers. com.). They have therefore no official status as a business initiative and little protection against frauds or limited legal status to form long-term contracts with their retailers and ensure that the terms are respected. Some of their retailers have already not renewed their contract and the stall in Tilaurakot-Kapilavastu had, by January 2019, been taken over by a local retailer who still had some of the original stock from the Tharu women group but whose focus was more on mass-produced Buddhist souvenirs (Figure 6.9c-6.9d).

The limited exposure and understanding of the local history, culture and heritage of the Tarai before, during and after visitors' stay in Lumbini has certainly undermined more broadly the success of initiatives, like the Tharu women's group in Tilaurakot-Kapilavastu or UNDP TRPAP, and the commercialisation of local crafts and village tours. Very similar patterns from the ones observed for local handicraft souvenir sales can be linked to the limited success of the local village tours, which offered an experience of traditional landscape, lifestyle, crafts and food. It can also be associated with the current low number of visitors using local tour guide services. Indeed, for the latter, training programmes have introduced them to Buddhist history, texts and principles, but their comparative advantage compared to foreign or other Nepali tour guides is their knowledge of the local history, culture, lifestyle and communities in the Tarai and Lumbini. In the current site presentation with the lack of visibility of local communities, practices and local culture within the LMP, this comparative advantage remains systematically under-exploited.

Figure 6.9 : Evolution of the Tharu *Hariyali Hastakala* Women Group's stall in Tilaurakot-Kapilavastu:
Figure 6.9a (top): the stall at its opening in 2016 (Photos: Author, February 2016)
Figure 6.9b (bottom) : the stall, repainted and fully stocked in 2018 (Photo: Author, February 2018)

Figure 6.9c (top) : the stall at the last visit in January 2019, under a new retailer (Photos: Author, January 2019)

Figure 6.9d (bottom) : view of the new mass-produced souvenirs sold in the stall in January 2019 (Photos: Author, January 2019)

Recently the ADB-funded SATID project has been reviving some of the projects initiated by TRPAP, with training programmes, village tours signboards, brochures and leaflets on the village tours and more broadly on the local culture and festivals (Figure 6.10). These recent efforts by SATIDP are indicative of the additional cost(s) generated by the isolation and alienation. Before being able to successfully commercialise and commodify local handicraft and other aspects of the local culture, including intangible traditions, like cultural shows, village tours, local food, the project first needs to promote and raise awareness about the local culture. This process therefore represents additional activities, funds and outputs, but also delays in delivering the expected outcomes to extend visitor length of stay, reduce leakages and increasing visitor spending in Lumbini, but also reduce income poverty and empower marginalised communities and groups.

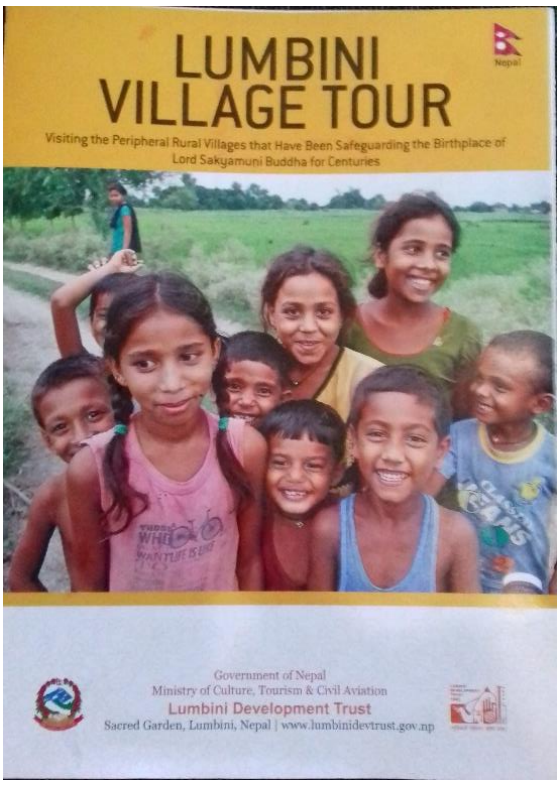


Figure 6.10 : Front page of the brochure funded by ADB and prepared in 2017-2018 by the LDT on local culture, festivals and village tours
(Photo: Author, March 2017; Leaflet: Lumbini Development Trust)

While the data collected as part of this thesis on visitor spending patterns begins to provide insights in factors affecting demand, there is still a limited understanding of the latter and therefore on the marketability of various local crafts and items and commercialisation of wider activities related to local culture. The literature on handicraft and souvenir shopping in tourism research identifies key factors linked to the demand, including age, gender, purpose of visit or nationality and cultural background (Littrel et al. 1993; Anderson and Littrel 1995; Hu and Yu 2007; Di Giovine 2012). These are all relevant in Lumbini and the data collected in the thesis notably highlighted differences in spending patterns on souvenirs between proximity visitors from Nepal and India, other Asian and non-Asian visitors. The promotion of village tours and local handicraft has tended to be designed and promoted for non-Asian cultural tourists who, at present, tend to spend less on souvenir shopping. Findings from the thesis suggest that there is also a domestic market from within Nepal, particularly for local handicraft as local visitors are

higher spenders on shopping than non-Asian visitors. Other evidence, notably from Tilaurakot-Kapilavastu tends to support this observation. For instance, the Tharu *Hariyali Hastakala* women group's experience originally was that their best sales were done in a shop in the town of Butwal where there was an urban population interested in traditional rural crafts (pers. com.; Gauli 2016: 13). In comparison, the sales at the stall in Tilaurakot-Kapilavastu were never as significant, despite the increasing number of international visitors, especially Asian and Buddhist groups.

The latter markets, including pilgrims and visitors coming for religious reasons, but also other Asian visitors, remain very little understood, although it represents the main international market in Lumbini. The thesis' regressions were not statistically conclusive in identifying specific spending patterns among Buddhist and/or other Asian visitors. While the village tours and traditional craft may have the potential in the future to interest cultural tourists or visitors with a wide range of interests and reasons for coming to Lumbini, the latter groups, especially pilgrims and visitors coming for purely religious reasons, have different interests, as indicated in their current practices and routes within the GLA that differ from other visitors. Therefore, the limited understanding of their spending patterns in Lumbini and factors determining them is a major gap for current and future evaluation of interventions and the social and economic impacts of the development of Lumbini and the GLA. This lack of evidence is particularly problematic as they represent the target market for on-going development projects, including the WBG's Buddhist Circuit and ADB's projects.

The IMF document prepared for the WHS management already provides certain responses to strengthen the integration and links between sites and local stakeholders. The redefinition of the site managers' mission towards a broader regional heritage-based development but also the formalisation of the consultation and conflict resolution process with the local elected bodies at local and regional level (Municipality and District) addresses some of the organisational factors that have contributed to the site's isolation and alienation from surrounding communities. However, the results from the thesis indicate that the site's isolation, the alienation of local culture and communities within it and the induced costs for poverty alleviation programmes in tourism and heritage-based development interventions have several roots and originate from various processes that are not all addressed in the current management plans and on-going and planned regional and local interventions. The IMF addresses the organisational factors, but some of the causes are also geographical, notably the distance between the WHS and surrounding villages separated by the Project Area and divided by the wall around it, and structural. The current definition of the site's heritage values with, for

instance, the WHS's nomination, based on the site being "*one of the holiest places of one of the world's great religions, and its remains contain important evidence about the very nature of Buddhist pilgrimage centres from a very early period*" (WHC 1997: 12-3), focuses on the ancient Buddhist phases and values associated with the archaeological site. The presentation of Lumbini reflects this focus and tend to neglect the more local and later historical and contemporary history of the area, thus contributing to a certain extent to the site's isolation and the alienation of local communities from the LMP Project Area.

The results from Lumbini raise a broader discussion on strategies to increase visitors' contribution to the local economy but also to poverty alleviation programmes in a heritage context, notably through increased length of stay and spending. The recent study conducted by Weerasinghe and Schmidt (2017: 25) at Sigiriya WHS, for instance, has indicated a similar divide to the one existing in Lumbini between the "*rock*" and the surrounding communities. Typical visitors to Sigiriya go to the ancient city, climb up to the summit of the 'Lion's Rock' and out again, without any interaction with local communities beyond the tourist shops at the entrance/exit of the site. The authors describe a situation where villagers "*remain seriously marginalized in terms of its management and the interpretation of Sigiriya values*" (Weerasinghe and Schmidt 2017: 25-6). Indeed, the wider living heritage around Sigiriya, including "*the village settlement, paddies, and forests with their extraordinary array of reservoirs and irrigation systems developed some 1400 years ago*" is at risk from infrastructure projects and other developments closely associated with mass tourism in the WHS (ibid.).

Sigiriya is not unique in Sri Lanka and South Asia nor among WHSs, with several sites facing similar criticisms related to the lack of integration of local communities in the tourism and heritage management, but also to their representation in heritage site presentation and interpretation (Black and Wall 2001; Anaya 2012; Disko et al. 2014). The associated ethical issues, related to alienation, polarisation, inequalities, inter and intra-community conflicts, and socio-political dynamics have been extensively discussed in previous research (Chapagain 2008; Seneviratne 2008; Coningham and Lewer 2000; Wickramasinghe 2013; Buultjens et al. 2014). There is, however, no study that has provided a comparable dataset to the one collected in Lumbini linking the issues with visitor's contribution and their spending patterns, and therefore Lumbini gives unparalleled insights on the more financial consequences of this lack of linkages between archaeological sites and surrounding communities, notably for the commercialisation of crafts, arts but also more broadly for development policies and poverty alleviation programmes in tourism and heritage. By identifying barriers to development and poverty alleviation initiatives, the research informs possible responses and where to focus actions and

interventions to increase economic and social impacts of heritage interventions. The process has also enabled to identify evidence that would be needed to inform effective responses and initiatives in the future.

6.3.4. Moving forward: Implications and application of the results in heritage research and practice

The research process has initiated a broader reflection, beyond the initial focus of the thesis, on the close ties between planning, monitoring, evaluation and community engagement, especially in terms of delivering change. In parallel with the thesis' research, the author has been involved in projects conducted by Durham University's UNESCO Chair in Archaeological Ethics in Cultural Heritage Practice in the GLA and South Asia which have addressed similar challenges in heritage research and practice. This reflection has thus drawn from these experiences but also more broadly from ethical and practical paradigms in archaeology, natural and cultural heritage management, development, human participants in research and in impact evaluation (Scarre and Coningham 2013; ICOMOS Australia 2013; Disko 2010; Thomas 2010; Baines et al. 2013). These considerations have been particularly significant in the context within which the research took place, in a transition period with new on-going interventions but also long-term policies and plans being developed for Lumbini and sites within the GLA. With the results of the thesis having possible implications for on-going activities and planning for future development, it has raised ethical questions for the research to address.

This broader reflection notably builds on on-going debates, and particularly recent development in environmental policies, involving notably the role and scope of impact assessments and the implications for their implementation (Finsterbusch, 1995; Devlin and Yap 2008; O'Faircheallaigh 2009, 2010). As part of the shift towards policies which aim to 'at least do no harm', discussed in Chapter 2 (Section 2.2.3), Environmental Impact Assessments (EIA) now include both social and economic impact assessment to evaluate the impact of a project on indigenous populations and local communities. The experience in EIA has raised issues and questions regarding what an effective social and economic impact evaluation is and does. For instance, O'Faircheallaigh (2009: 96) summarises the discussion as follows:

"*The application of 'effective' SIA* [Social Impact Assessment] *could greatly enhance the prospects for positive outcomes by identifying and minimizing negative social and cultural effects and identifying potential positive effects and assisting Aboriginal people to take advantage of them. In contrast, 'ineffective' SIA can not only result in a failure to manage risks and grasp opportunities, but can itself represent a negative impact (Finsterbusch, 1995: 23). This*

is especially so in an indigenous context where SIA that fails to address local interests can reinforce the mistrust and alienation generated by the historical marginalization of indigenous peoples from 'mainstream' governance institutions".

The recognition of these possible negative repercussions of impact evaluation and assessment has implications for evaluation practices and approaches. The scope of the evaluation goes beyond the observation and reporting of impacts to providing responses and ways to address issues that have been identified in the evaluation process (Devlin and Yap 2008: 17; Lockie 2001: 279–80). In turn, these responses implementation and impact ought to be monitored and assessed through continued monitoring and evaluation (O'Faircheallaigh 2009: 97-8). The other implication of extending the scope of impact evaluation to providing responses is that it encourages further community participation in the evaluation process, notably for defining effective measures to address existing issues (Del Furia and Wallace-Jones 1998; Devlin and Yap 2008; O'Faircheallaigh 2010). Previous experiences have also suggested that recommendations of evaluation reports have often been ignored afterwards, notably due to the absence of incentives or binding commitments with developers or governments and/or to the lack of resources (O'Faircheallaigh, 1999, 2017: 1182; Chanchitprichaa and Bond 2013: 68-9; Sandham and Pretorius, 2008: 237-8). Public and/or stakeholder participation in the evaluation process creates further incentive for the recommendations made by the evaluation team to be implemented, especially if they are included in the decision-making process (Devlin and Jap 2008; Ika 2012: 34-5).

The thesis' results have fed into on-going research and projects in the GLA, responding to threats caused by accelerated development, notably through the close links with Durham UNESCO Chair's activities in the region. In collaboration with site managers and national and international partners, including academic researchers, international organisation staff and heritage practitioners, the UNESCO Chair's research programme focuses on "*shaping debates on professional standards and responsibilities; legal and ethical codes and values; concepts of stewardship and custodianship; research ethics and illicit antiquities; and the social, ethical and economic impacts of the promotion of heritage, particularly at religious and pilgrimage sites*" (Durham UNESCO Chair 2018a: n.p). Its activities have involved research at other sites within the GLA, including Tilaurakot-Kapilavastu, but also well-established pilgrimage sites like Champaner-Pavagadh WHS (India), developing sites like Jaffna Fort (Sri Lanka), and post-disaster research, like the post-earthquake context of the Kathmandu Valley WHS. The UNESCO Chair has developed a research policy, structured around a circular process of engagement, research and dissemination (Figure 6.11) within which different methods of community engagement and

Figure 6.11 : Durham University's UNESCO Chair research and community engagement process
Source: UNESCO Chair in Archaeological Ethics and Practice in Cultural Heritage, Durham University, United Kingdom

public dissemination have been piloted. It has also involved working alongside archaeological research, planning, conservation, presentation and interpretation programmes, on both impact evaluation and community engagement projects which has greatly enriched the thesis' reflection on impact evaluation effectiveness, outcomes and scope of activities.

In Lumbini and the GLA, the long-term involvement of the UNESCO Chair research team in the region, over the three phases of the UNESCO/JFIT mission on '*Strengthening conservation and management of Lumbini, the Birthplace of Lord Buddha, World Heritage property*' (2010-present), has provided opportunities to apply similar data collection methods and develop additional methodological tools to monitor and evaluate changes over time at other key sites in the GLA. The latter changes have been both linked to the UNESCO/JFIT mission but also to external factors and the accelerated development of the region which affect the preservation of heritage sites, communities living around them and the people-site interactions and connections. As an actor of change in the GLA, the UNESCO Chair has initiated monitoring and evaluation processes but also community engagement programmes and activities with different objectives which can be summarised as follows:

- Benchmarking, recording and building knowledge and understanding about local perception and uses of sites (movement, practices, local stories, intangible traditions, religion, social role, and the links with local tangible heritage and production chain);
- Monitoring and evaluating the impacts of increasing pilgrimage and tourism activities, the UNESCO/JFIT interventions and wider regional developments on local communities and their perceptions and uses of sites;
- Identifying needs with key stakeholders and community members and co-designing approaches to address them.

Tilaurakot-Kapilavastu but also the nearby site of Dohani, where the DoA (Government of Nepal) was conducting excavations in 2017 and 2018 were the two main sites where these activities were piloted, but some of the activities extended to other GLA sites (Coningham et al. 2017, 2018). The monitoring of the impact and uses of the temporary infrastructure, like the pathways, routes and signboards on site, and a temporary museum exhibition in the new Tilaurakot-Kapilavastu archaeological museum, have informed the designs and proposals from the UNESCO/JFIT mission for the development of the permanent infrastructure (Coningham et al. in prep). The process also informed the archaeological team's own activities, by identifying gaps and needs with stakeholders and community members related to the identification, protection, presentation and interpretation of the archaeological heritage. More specifically, over the three phases of the mission, the team has initiated, developed and extended programmes and activities related to the dissemination of its research, education and awareness-raising about the local archaeology and the threats to heritage, but also activities aiming to bring local community, traditions and culture in archaeological sites presentation, interpretation and management (Lewer et al. 2019; Lafortune-Bernard et al. 2018). All these components were brought together in the development of participatory projects, notably involving local schools and local administrations, and the organisation of an annual heritage festival to promote local culture, crafts to visitors and bringing in school children and local families within the archaeological site and museum (Coningham et al. in prep).

Overall, this research programme and related activities have confirmed parallels between the thesis' findings in Lumbini and patterns observed at other sites in the GLA. Section 6.3.2 has notably discussed the links with length of stay, visitor practices and spending, but also the processes of heritage site isolation and alienation of local communities taking place alongside site development at other archaeological sites within the GLA. These findings reinforce the importance of integrating the different level of governance, from international, national, regional and local in the GLA development, especially for ensuring "*complementarity of action*

between archaeological site excavation and protection measures with the wider economic and development infrastructure plans'" (Lewer et al. 2019: 71).

Moreover, the data, information and community engagement activities have informed the current planning process, within the UNESCO/JFIT mission, including the potential negative impacts of site development on local communities and implementation of possible corrective measures to address emerging issues. The latter notably contributed in identifying needs based on community consultation, education, heritage interpretation, but also in management processes and community engagement. Possible responses are being piloted including for bringing in communities into "*archaeological project conceptualisation and management"* (Lewer et al. 2019: 71). There have been already some visible impacts, particularly in the perception and consideration of local issues within the international mission itself and the partners involved, as reflected in the new activities that are implemented by partners, including an annual heritage festival at Tilaurakot-Kapilavastu. Nonetheless, more mid and long-term monitoring and evaluation are needed to assess the effectiveness of these measures on strengthening the linkages with the local economy and social, religious and cultural traditions and activities of different local communities.

Beyond the GLA, the approach to recording local perceptions and uses of sites, impact monitoring and evaluation initiated at Tilaurakot-Kapilavastu has also been piloted by Durham UNESCO Chair at other sites and in other contexts, including Jaffna Fort, Polonnaruva WHS, in Sri Lanka, Champaner-Pavagadh WHS, in India, and Durham Cathedral and Castle WHS, in the United Kingdom. This research finds many parallels with issues and queries raised by the results of the thesis' primary data collection. Among the research activities conducted, for instance, pilot studies have been undertaken in Jaffna Fort and Tilaurakot-Kapilavastu on visitors' souvenir purchasing behaviours. As discussed in Section 6.3.3., the commercialisation of locally-made handicraft in Lumbini has faced several challenges which the thesis links to the alienation of the local culture and communities within the LMP Project Area. The initial results from the pilot studies have tended to support this observation but have also provided additional evidence to better understand the factors encouraging or discouraging visitors to purchase traditional and/or locally-made items at heritage sites. Building on the pilot studies' methodology, similar data collection in Lumbini would provide evidence for addressing the current issues with existing market leakages but also with the mid and long-term outcomes of poverty alleviation projects.

Overall, the application of the methodology at different South Asian and World Heritage sites as part of Durham UNESCO Chair's research activities has therefore tended to confirm the

transferability of the approach and the rapid assessment methods developed for the thesis in other social and economic contexts and other heritage sites. The results at the different sites also indicate a further need to consider systematic approaches to integrating community engagement activities in benchmarking, monitoring an evaluation processes, notably alongside archaeological investigations, and to pilot participatory projects to mitigate some of the negative effects identified (Coningham and Lewer 2019).

6.4. Data gap analysis and evidence-building for evaluating the role of heritage in development

Beyond the case of Lumbini, the thesis' data gap analysis approach and the data collection methodology developed for it have potential applications in the current process of evidence-building to demonstrate wider values and impacts of heritage (CHCfE 2015; UNESCO 2014; Hosagrahar et al. 2016). As discussed in Chapter 4 (Section 4.1.2), the lack of data to support quantitative assessments remains a major challenge for evaluating the impacts of heritage-based development strategies or regeneration projects worldwide (UNESCO Institute of Statistics 2012; Deloumeaux 2013; Nypan 2015). The step-by-step data gap analysis approach used in Lumbini to review the evidence available for policymakers, planners and managers for evaluating the social and economic impact of a heritage site is key to identify where further data-sharing is required, but also where additional data collection is needed. Ultimately, this process enables to define an effective strategy to focus on the existing gaps to be addressed, thus informing decision and management, through evidence-based monitoring and evaluation. However, a data gap analysis focuses on a defined scope and selected indicators that are tailored to the context and research questions. In Lumbini, for instance, the analytical framework provided the scope of the analysis, but was itself confined by the limited availability and accessibility of administrative and public data in Nepal, especially for the earlier phases of the LMP implementation. Potential applications of the approach and methodology therefore requires adaptation to specific contexts, including for determining the scope, identifying the sources available and developing a data gap-closing strategy. Its application in a heritage context as a foundation for monitoring and evaluating social and economic impact of heritage brings additional challenges that are discussed as well.

This section focuses on the contribution that the use of the data gap analysis approach can make to heritage-based development projects, but also on the challenges of adapting it in different contexts. The first sub-section considers the use of the data gap analysis to identify the gaps but also their origin within different data sources available and what implications these findings have on gap-closing strategies. Through this process, the data gap analysis can make a significant

contribution to the evidence-building process at site level, but also more broadly at national or international level, in both developing and developed countries. Ultimately, the section discusses possible applications of a data gap analysis at other sites and different contexts within heritage studies and management. The discussion highlights some ethical and practical considerations related to the scope of the data gap analysis and what implications these have on adapting the approach used in this thesis to different sites and contexts. Overall, this section tackles what makes an 'effective' data gap analysis, one that can build the evidence required to inform policies and interventions in heritage management.

6.4.1. The contribution of the data gap analysis approach for evidence-building and evaluation practice

The original thesis proposal aimed to conduct a longitudinal evaluation of the social and economic impact of the implementation of the LMP since 1978 on local communities, based on a set of social and economic indicators within a broad evaluation framework. However, preliminary research undertaken in Lumbini, in February-March 2017, to identify data systems and sources and assess the availability, accessibility and reliability of existing information for the period of the study (1978-present) began to identify major gaps in the existing data. The gaps limited the options for conducting a social and economic impact evaluation of the LMP implementation. Similar experiences and research elsewhere at other sites in South Asia and other developing but also developed countries indicate that this is a broader and shared issue across the heritage sector (Deloumeaux 2013; Mitchell and Ashley 2010; Dumcke and Gnedovsky 2013; RFA 2015). The limitations in the available and accessible data affect the ability to effectively measure the social and economic impact of development and tourism at individual heritage sites. The data gap analysis enables to identify what the gaps are but also where they originate from. Understanding the origin(s) of the evidence gaps is particularly important in order to define strategies to address the gaps and reduce them for more effective impact evaluations. This consideration is important at site level but also has applications at national and international level in developing as well as developed countries.

While evidence gaps are found across the heritage sector worldwide, developing countries have additional challenges to evidence-building for evaluating impact at national and local level compared to developed countries. In this thesis, for instance, the challenges related to the availability and accessibility of administrative and public data at the national level, in Nepal, have restricted the scope of the study. These gaps have affected particularly the formulation of social but also socio-economic indicators within the analytical framework. They have been

designed to evaluate impacts that could be closely and directly linked to the development objectives defined in the conception and preparation phases, rather than considering holistic impacts of heritage and site development in the local area. In Lumbini, the administrative and public data gaps have been linked to decades of political instability, successions of administrations and limited resources which have hindered data collection. Data management and processing and the development of digitised systems and mechanisms to facilitate public access to the existing data, especially disaggregated data for local municipal or village level have also been a challenge (Dennison and Rana 2017: 11-14; NPC 2017: 21). Therefore, before beginning the data gap analysis at Lumbini, some major gaps in the national and public administration data were already known and the framework adapted in response to these limitations.

In developed countries, the challenges that have been related to using national administrative and public data for evaluating impact of heritage are less linked to the availability of the data and more linked to the "*discrepancy in the content of each* [cultural or heritage] *category, differences in definitions and a lack of homogeneity in years available for different data among and within countries*" (Deloumeaux 2013: 190). The data gaps related to availability and accessibility to public and administrative data therefore is still an important problem for understanding the social and economic role of heritage in developing and developed countries but has different roots in both contexts. This observation has repercussions on how to approach data gaps in heritage management, especially on designing and implementing data-gap closing strategies in these different contexts. While the models designed for developed countries focus on standardising data collection approaches for culture and heritage sectors in different national administrative to improve comparability between countries and over time, in developing countries, the challenge touches upon much broader issues with data availability and accessibility. A repercussion is that the responses to these evidence gaps for evaluating the impact of heritage at national, regional or local level in many cases cannot be conceived within a short or mid-term perspective. It represents an additional challenge for sites in developing countries to monitor and evaluate their impact and a stronger reliance on site manager's data and/or third-party studies, but also innovative ways of collecting data to provide alternative, if not quite equivalent, evidence of impacts.

Where sites in developing and developed countries have more in common is in the nature and origin of data gaps from the other data sources available, i.e. site managers and third-parties. The origin of these data gaps is partly related to manager's policies and capacity to collect data, including resources available, but also to their coverage which is limited to the area and

activities within the heritage site. The complementarity of evidence collected and data-sharing between site managers and/or third-parties can also be a source of significant data gaps. In Lumbini, for instance, the LDT collects primarily data on visitor nationality, but has limited data on the purpose of visit, length of stay of visitors, but also on participation and attendance to festivals and special events, including, for instance, local religious festivals, but also international Buddhist events. Moreover, the LDT does not itself collect data on the tourism sector and activities outside the LMP but have a list of hotels from a study conducted by a third-party in 2012. While there may be more data collected at other sites, particularly in developed countries, data gaps are still an issue for site managers in the latter, including for evaluating broader impacts of the site outside the boundaries, but also for evaluating impacts within the site (Bowitz and Ibenholt 2009; Applejuice 2008). Among the limitations often mentioned, for instance, is a focus of the evidence on output and numbers of visitors or participants rather than outcomes, like their spending, or the social outcome of their visit or participation, related to education and other indicators listed previously (Labadi 2008: 14-19; Taylor et al. 2015). These gaps are partly related to existing limitations in the current understanding of the social impacts, what they are, but also in the tools available to evaluate them. Additional studies and research activities of specialists, experts and researchers, piloting new approaches to evaluating social impacts of sites, but also to test and discuss the use and misuses of new tools available, including through new technological innovations, should contribute to developing evidence building for outcomes and impact evaluations.

However, a Heritage Lottery Fund-commissioned study (RFA 2015) on the reporting of impacts for its funded projects also indicates other challenges related to more internal issues that affect the gap-closing process for the site managers' data. Based on an analysis of 200 case studies from funded projects, the report identified two main factors affecting the quality of evaluation and the data provided (ibid.: 4). One was the expertise used, with higher quality reports having been prepared by external consultants and organisations, rather than based on internal resources. The main other factors identified was the funding and therefore resources allocated to conducting the evaluation. Ultimately, a timing factor was also identified, with the earlier the data collection, monitoring and evaluation process started within the project lifespan, the better the final report tended to be. Similar observations can be extended to long-term evidence building on the impact of heritage, with the limited internal expertise along with limited resources allocated to evaluating impacts being key factors impairing gap-closing strategies. Implications of these observations determine the effectiveness of gap-closing strategies and are linked to a variety of factors, including both structural and organisational factors. The

development of internal policies for evidence-building, monitoring and evaluation, is thus critical to define clear monitoring and evaluation objectives, allocated resources and funding and the type of data collected internally, and to bridge data gaps that can be addressed by data collected by site managers. Moreover, training and skill-building are important to consider for building internal expertise to be able to analyse the collected data internally. The combination of clear policies and internal skills offers more opportunity to have continuity in the monitoring and evaluation of impact, rather than relying on occasional or project-related external inputs from third-parties, as is currently the case in Lumbini, but also at other GLA, Buddhist Circuit and more broadly in many heritage-based development interventions.

Another origin for data gaps is linked to data-sharing between different site managers themselves but also with third-parties. As discussed before in Chapter 4 (Section 4.1.2), the gaps can originate from site managers only having access to part of the evidence, like in-text references in reports, or having access to no data at all, for an unpublished study for instance. It can also be that site managers are unaware of the existence of such data and studies, including, for instance, academic research, dissertations, thesis or studies commissioned by another stakeholder or site manager which existence are not always known by all site managers and stakeholders. At a workshop held in Durham (UK) and discussing local WHS, for instance, these gaps have been referred to as "*known unknowns*" (Durham UNESCO Chair 2018b: n.p). The gaps originating from these data-sharing issues therefore require different approaches for site managers that are closely linked to management policies. These include strengthening links and collaboration with other partners involved in the site management and local administrations, including defining and implementing data-sharing policies between main stakeholders. In Lumbini, for instance, the development of data-sharing policies would involve the site owners and managers, LDT, DoA and World Heritage Centre, associated authorities, as defined in the IMF, and donors.

More broadly, it also raises questions regarding data and information-sharing policies with third-parties. In a context like Lumbini and the GLA especially, where the LDT has limited internal resources and there is a multiplicity of third-parties collecting data, including the WBG and ADB themselves outsourcing impact studies to external consultants, the information and data passed on to site managers often trickles down. At the end of the line, the main site managers have access to a limited share of the data and information. The IMF recommends a creation of a repository in Lumbini that would provide a physical location for site managers to keep an archive including consultant reports and data collected within the LMP. However, as mentioned above, collecting evidence from various sources and archiving it internally is a foundation for site

managers to use for monitoring and evaluation, but without allocated resources or internal expertise, the risk is that the evidence collected remain unexploited. A broader approach has been, for instance, developed by the National Trust (UK) in its research strategy within which it identifies collaboration with partners and research institutions as a priority and set up various partnerships and collaborative projects around key research questions (National Trust 2016: 12). While the National Trust's public document on its research strategy does not specify the extent of data-sharing between partners and within the collaborative projects, it allows for an agreed policy with institutions and actors conducting studies and research on its heritage sites.

The challenges for data-sharing between site managers and with third-parties are very context-dependent. They can be closely linked to the legal framework within which the site managers operate. For instance, in the UK the 2018 Data Protection Act (DPA) restricts what data, organisations can share without the acknowledged permission of the individual. That has repercussion for site managers on the data that they can share between them, when a site is under multiple ownerships and management, but also the data that they can request or obtain from third-parties when personal data is involved, including for outsourced ticketing activities, for example. In this case, better defined and clear data-sharing and data management policies at site level, between site managers and with third-parties, go hand-in-hand with a better understanding of the related ethical issues but also the legal restrictions.

Another context-dependent factor for developing data-sharing policies is the dynamics between site managers and partners. As mentioned before, in Lumbini, the multiplicity of donors and actors involved represents an important challenge for evidence-building and data-sharing. Beyond the challenges emerging from the coordination of all these projects and actors, especially for data-sharing, the nature of the relation, based on a donor-recipient dynamic, adds to the complexity of defining an evidence-building and data-sharing policy at site level. Foreign aid and development studies have a rich literature on development paradigms and how "*the charity stance, have moulded aid disbursement and evaluation*" (Gasper 1999: 23; see also Groves and Hinton 2004; Gyawali et al. 2017). In the case of Lumbini, Buddhist Circuits and international development projects, the data for monitoring and evaluation is, for instance, primarily collected by various third-parties, based on requirements or queries set by donors (Jassey 2004; Kay 2012: 891; Nicholls et al. 2010: 250). Although evaluation processes increasingly involve stakeholders' consultations, donors and third-parties shape to a significant extent the evidence-building on social and economic impact, with limited possibilities for site managers but also local actors to contribute in the definition of what the monitoring and evaluation questions should be (ibid.). The other implication relates to the accessibility of the

data for site managers and their capacity to set requirements within their internal policies regarding the level of data accessibility and quality that they request from partners.

Overall, the sources and origins of the data gaps have a significant impact on the possible measures and strategies that can be adopted to bridge the gaps. Some gaps can be compensated or bridged through internal data collection, which requires to allocate funding and resources for this purpose. But for other gaps, notably ones emerging from availability and accessibility of public and administrative data, the perspective for gap-closing may be more long-term. For others, gap-closing strategies involve reconsiderations of managerial processes, including internal organisational factors, developing internal expertise and skills, but also policies towards collaboration and data-sharing with other stakeholders and partners which are affected by the existing restrictions, linked notably to ethical considerations, legislation but also dynamics between key parties involved. The process of the data gap analysis and the results, therefore, are in themselves insufficient to bring change, but they provide critical information regarding what data is missing but also the source or origin of the gap which can then inform the stakeholders on the measures that would be required to close it. It closely relates to current issues in heritage studies and management and to the on-going process of creating shared international frameworks for evaluating the impact of heritage, but also evidence-based approach to individual site management.

6.4.2. The scope of the data gap analysis in relation to ethical practice

The review of the application of the data gap analysis methodology in other contexts (Section 4.2.2) recognised that the scope of the data gap analysis is not holistic but determined by the question that it is trying to answer and/or the specific framework used. It is also limited by the broader practical issues, such as availability of national administrative data as was discussed for Lumbini. The approach has, however, never been used previously for impact evaluation in a heritage context. The application of the data gap analysis in Lumbini suggested another factor that limits or affects its scope, in the latter context, which is the definition of the site values, especially those related to social, religious and economic values for local communities. While the framework and indicators used were based on a thorough analysis of the literature and commonly agreed social and economic impacts of heritage, some of the indicators, especially for social impacts, were selected because they closely related to objectives defined in the conception and preparation phases of the LMP and thus should have been integrated in the site development and policies. These objectives were based on recommendations and conclusions of early missions (Section 2.2) and related to how the mission experts have defined the

economic, social and religious values of Lumbini and related uses, including as a potential international visitor attraction and a living sacred site, but also an agricultural and residential zone before the LMP.

The concepts of values and significance in heritage studies are closely linked to contemporary perceptions and uses of heritage sites by different local, national and international stakeholders (ICOMOS Australia 2013; Mason 2002, 2006; Poulios 2014). The concept of cultural significance, which formulates the different values associated to a site, has been widely discussed, both in terms of the categories of values associated with heritage, but also in terms of the diversity of perceptions of these values and the site's overall cultural significance for different stakeholders (Fredheim and Khalaf 2016; English Heritage 2008; Mason 2002: 10; ICOMOS Australia 2013). Therefore, there is not a single unique statement of significance and values, but many interpretations (Silberman 2012, 2013). The way these interpretations are integrated in heritage management, presentation and protection is dependent on many political, social, economic and other factors and have strong ethical implications (Scarre and Scarre 2006; Scarre and Coningham 2013; Tunbridge and Ashworth 1996). There is notably a rich literature on the politics involved, power imbalance between stakeholders and the rights of indigenous and local communities in defining values associated with heritage (Logan 2012; Disko et al. 2014).

The Getty Conservation Institute's study (Mason et al. 2003) on the values and significance of Hadrian's Wall WHS is an example from another WHS that clearly highlights the link between values and impact evaluation. The objectives of the study were to identify values associated with the site and how they were taken into account in the site management, but also assess the impact of the site policies and management on these values. The report specifies that "*the current understanding of the site's values is explicitly represented in the two Management Plans […] on which there is consensus*", but each stakeholder is "*likely to have projects and hold values that are not accounted for in the plan*" (ibid.: 25, 26). The evaluation of the local impact of site management and development was therefore based on agreed values, including archaeological, historical, natural, but also contemporary values. The latter included various economic, recreation, educational, social and political components, including the site's role in the local agropastoral economic sector (ibid.: 26). However, it did not consider other social or economic values beyond this consensus, nor how they had changed and been impacted by site management and policies. While all impact monitoring and evaluation framework have a limited scope, the risk in a heritage context is to systematically disregard social and economic impacts, positive or negative, that are significant for certain groups and stakeholders because they are not within the more widely recognised heritage values (Smith 2012). Considering that these

recognised values are themselves the results of a complex dynamic of political, social, historical or economic factors, their inclusion or exclusion from an impact evaluation is closely linked to these processes.

If the purpose of an impact evaluation, especially at site level, "*is to shape impacts […] [and] the development of strategies*" (O'Faircheallaigh 2009: 97) to address issues and enhance the benefit of heritage, notably for marginalised groups, the definition of the scope of the evaluation and indicators have therefore important ethical dimensions. The data gap analysis acts as a foundation for future impact evaluation and therefore its scope is just as critical in determining future change and management. The literature notably suggests repercussions for heritage values that are not recognised as part of the site management on their identification, protection, conservation, presentation and interpretation (Fredheim and Khalaf 2016; Smith and Waterton 2009; Auclair and Fairclough 2015: 12-3; Sinha 2013: 186-7).

Values that are not recognised in the site management, or considered dissonant, for instance, are less likely to be protected and presented within a heritage site and its management processes, and therefore more likely to be forgotten or purposely suppressed and destroyed (Graham et al. 2000; Chapagain 2013: 8; Wijesuriya 2003). They are also more at risk of disappearing without being recorded and in some cases directly undermined by development or management decisions (Palazzo and Pugliano 2015: 55; Holtorf and Kristensen 2015; Ndoro 2004: 81−2). While for economic impact, the implications in the heritage context primarily relate to determining the economic cost(s) related to displacement of activities, i.e. ban of certain economic activities within or around archaeological sites, for social impacts the implications are more significant (Byrne 2004). The influence that heritage values can have in determining to a certain extent the social indicators used and the scope of the data gap analysis introduces ethical issues related to the definition of these values.

The literature on heritage values ethical practice have emphasized the importance of the contribution of a wide range of stakeholders, including indigenous populations and local communities, in the process of 'heritage-making' and the identification of the values of heritage sites. One of the most influential documents for developing this approach has been ICOMOS Australia's (1979, 2013) *Burra Charter* that also introduced the concept of cultural significance. In this document, preserving the cultural significance, defined by the different aesthetic, historical, scientific, social or spiritual values attributed to a place requires that:

"*Groups and individuals with associations with the place as well as those involved in its management should be provided with opportunities to contribute to and participate in*

identifying and understanding the cultural significance of the place. Where appropriate they should also have opportunities to participate in its conservation and management". (ICOMOS Australia 2013: art. 26.3)

In practice, however, previous research and studies have indicated that, in many cases, the definition of values remains closely controlled by a strong minority of dominant stakeholders, including experts but also influenced by existing political, social, economic dynamics (Scarre and Coningham 2013; Smith 2012: 3). Some authors have referred to the observed status quo as the Accepted Heritage Discourse in which dissonant values and heritage are still "*ignored or go unidentified*" (Waterton and Smith 2010: 4; see also Smith and Waterton 2009). For instance, within the Buddhist Circuit, as discussed in Section 6.3, this has been reflected in the process of 'Buddhist place-making', with the local culture, practices at heritage sites being relegated to a less central position, as Buddhist practices develop, and not being formally identified, recognised in the management processes or presented to visitors (Nugteren 2014: 208; Ray 2012; Wickramasinghe 2013: 97). In Lumbini, this process is reflected in the changes in the use of the site as a place of local worship, the loss of knowledge on local religious practices, the invisibility of current local practices and local culture within the site.

The influence of these processes in the recognition of values of heritage has repercussion for the scope of impact evaluation and data gap analysis, particularly at the site level. It questions what values and related indicators are integrated within the framework among the diversity of contemporary economic, social, environmental, religious, aesthetic, recreation, educational or political values, etc. It suggests, that just like the cultural significance statement of a site, the scope of the framework and selected indicators used to monitor and evaluate change should be justified through some level of participation of all stakeholders and groups and individuals with an association with the geographical area covered within the study and site managers. The design of the framework at site level therefore is partly influenced by the site values as defined by site managers but also by local communities, in order to effectively monitor and evaluate meaningful impacts, especially social impacts and negative economic effects on all stakeholders, including marginalised groups, but also to shape future management and define corrective measures. This suggests that there is no 'one-fit-all' framework for the data gap analysis to evaluate the evidence for economic and social impact of individual heritage sites, but that there is a need for some flexibility to integrate different values that may be impacted by change. The adaptability of the scope of the data gap analysis is already recognised in other fields but more specifically concerned with taking into account changes over time that may require reconsidering the dimensions and indicators included in the analysis (Ariño et al. 2016: 4). In

Lumbini, for instance, with the new data available on environmental conditions, the latter should be integrated in future evidence, building, monitoring and evaluation.

However, there are also widely recognised impacts of heritage, related notably to economic contribution, employment, education, cultural participation and social inclusion (Section 4.2.1). At site level, impact evaluation should be able to assess the site's performance, what impact it is generating, notably in comparison with other places in order to reflect on its management and policies, consider the need for additional or corrective measures and facilitate discussions between various international, national and local stakeholders (Deleon and Resnick-Terry 1998: 17; Ford and Berrang-Ford 2016; Engelli and Allison 2014: 3). While the design of the data gap analysis has to provide for some flexibility in the scope of the impact evaluation and indicators used to cater for the local values and context, there is, therefore, also a core economic, socio-economic and social impact element within the framework that should allow comparability between sites and across the heritage sector. While the study of a single site like Lumbini is insufficient to define the boundaries of that core element, the results from current international initiatives to standardise data collection on culture and heritage social and economic impact including the 2014 UNESCO *Culture for Development Toolkit* have the potential to define them more clearly. Further research, especially testing and piloting similar frameworks and approaches at different sites, will also contribute to develop effective evidence-building in heritage and more structured approaches to social and economic impact evaluation within the sector. Durham UNESCO Chair's research programme and network across South Asia and Europe has provided several cases studies for initiating some comparative applications of the approach used at Lumbini in other sites and contexts. The last section presents some initial reflections based on these pilot studies.

6.4.3. The application of the methodology in other contexts

As part of Durham's UNESCO Chair research projects, components of the methodology developed in Lumbini have been piloted at other sites, including Champaner-Pavagadh WHS, Tilaurakot-Kapilavastu, Polonnaruva WHS, Jaffna Fort and Durham Castle and Cathedral WHS. These pilots begin to provide a diverse sample of sites to test methodologies to both collect core comparable data on the social and economic impact of heritage sites and adapt the data collection to specific contexts. They begin to highlight similarities and ways forward but also some context-related challenges in evidence building and developing effective monitoring and evaluation tools.

At all sites that the UNESCO Chair has worked on, there were significant gaps in the existing data and evidence for the economic and social impacts of individual sites at local or even regional level. For the economic contribution, the Lumbini framework used well-established methods and indicators in the literature. These indicators were also used at the other sites and, when the data was not available or accessible, primary data was collected following similar rapid assessment methods. The approach and methodology have required minor adaptations primarily based on the nature of opportunity costs of various developments in various contexts. In Champaner-Pavagadh WHS, for instance, the characteristics of the site as a series of villages as well as a pilgrimage site, but also the difficult access to Pavagadh at the top of a natural hill, have both generated unique traditional livelihoods. One of those, for instance, is the use of donkeys, primarily owned by semi-nomadic communities living on the outskirts of the site. The potential cost(s) of on-going plans to build a cable car to the top of the Pavagadh Hill was thus significant for these communities in particular. At other sites, displacement or loss of agricultural lands and/or access to natural resources were more frequent negative economic or socio-economic effects.

The socio-economic dimension in the framework and its indicators were primarily related to employment in heritage and tourism sector, to participation as business owners and/or employees and income poverty reduction for different marginalised groups, including women, indigenous and low-caste communities. In the presence of large data gaps for all these indicators, surveys of businesses have been used at several sites to start bridging the gap. While total direct employment indicators and sub-indicators are easily transferable from one site to another, the application at different sites notably raised both practical issues but also questions regarding how to approach inclusion and participation of different communities and groups in different context.

In Lumbini, gender, caste, regional and ethnic determinants were used to differentiate groups, but caste and religious affiliation especially can be more sensitive questions in different contexts. Initial scoping interviews and discussions with site managers, and project partners enabled to identify when these questions were too sensitive to be integrated in the survey questionnaire. While proxy indicators have sometimes been identified and used, they are not always evident without more in-depth knowledge of the communities and local dynamics. Indeed, marginalisation can be defined by a variety of social, economic, political or cultural factors and their interactions, therefore the characteristics differ from one site to the other (Sen 1985, 1999; Prud'homme 2012). The changing definition of the marginalised groups in different contexts and practical and ethical considerations, including cultural sensitivity, affect the type

of sub-indicators to evaluate income poverty reduction and inclusion of different groups in tourism and heritage employment and business ownership. However, these variations do not prevent comparisons on how inclusive and how widespread the participation is at various levels of ownership, management and employment, based on recognised marginalised communities, as long as there is a clear justification for the definition given.

As mentioned previously, social indicators are more context-dependent and closely related to heritage values. However, among the widely recognised impacts of heritage, education, cultural participation and social inclusion were the ones that were particularly focused on to consider common indicators or approaches to compare sites' performances. At the different pilot sites, the site managers' policies towards each indicator were the focus of the scoping and evidence-building to consider comparability between management processes, structures and lessons-learnt approaches. While more based on qualitative observations than the identification and piloting of key indicators, this process suggested avenues for future research related to inclusiveness of the governance processes, i.e. transparency, local participation level, representativeness and inclusivity of the heritage values, and their translation in site presentation and interpretation.

The site managers' level of involvement in education has also been investigated as a key comparable measure of site performance. Initial scoping queries have involved considering site managers' education programmes, including the number and diversity of beneficiaries within local communities and population groups, especially gender and local marginalised groups. The inclusivity of site managers' policies is also critical in evidence-building for contribution to education. For instance, in Champaner-Pavagadh, local stakeholders' interviews raised the issue of site protection legislations being used to forbid any maintenance work on the local school building in Champaner, and other public building, notably the local panchayat building, both presenting signs of important structural weaknesses and damages. Since the interviews, permission was granted for the maintenance of the school building.

For the more flexible aspect of the social impacts related to heritage values, the approach that has been piloted at a few sites, including at Tilaurakot-Kapilavastu, Champaner-Pavagadh WHS or more recently Durham WHS (2018-2019), to identify site-specific indicators relied on a scoping process to define perceptions and uses by different local communities and groups locally, but also concerns and expectation linked to the site, its protection, management and development. The results were then used to characterise the values associated with the site, define potential risks or threats and consider, in a second stage, evidence-building approaches

to evaluate possible impacts. The scoping phase enabled the team to identify potential issues early on, consider mitigation avenues but also start building evidence to monitor and evaluate change. In Tilaurakot-Kapilavastu, for instance, the impact of increasing visitors and tourism infrastructure development on local ritual practices was recognised early on and data has begun to be collected to record current practices but also monitor changing uses of the site and local practices, in relation to new pathways being built since 2015.

6.5. Conclusion

Chapter 6 brought together findings from the previous chapters and discussed them in relation to the dual aim of the thesis of reviewing the development of Lumbini since the preparation of the Master Plan and assessing the current evidence for its economic and social impacts on local communities. The discussion thus met Objective 5 of this thesis and highlighted how the processes identified in the conception, preparation and implementation phases (Objectives 1 and 2) affected the measurable economic and social impacts of the site for local communities (Objective 4). Moreover, this chapter also discussed the analytical framework and methodological approach (Objective 3), based on a data gap analysis, to evaluate the existing evidence for the social and economic impact of the site development. The discussion of the results suggested that it is a helpful tool in the process of evidence-building in heritage management to identify the gaps and their origin in order to start considering how to address them. However, there are challenges related to its application to heritage site management and evidence-building for the heritage sector, related notably to wider ethical issues and cultural and practical considerations. The last chapter summarises and concludes on the aims and objectives of the thesis.

CHAPTER 7: CONCLUSION

7.1. Introduction

The aim of this thesis was to review the development of Lumbini since the preparation of the LMP and assess the current evidence for its economic and social impacts on local communities. Through the case-study, this research piloted approaches to tackle the evidence gaps for monitoring and evaluating more effectively the social and economic impact of heritage sites, notably by introducing a data gap analysis model. The thesis first produced a critical review of the current understanding of the social and economic impacts of the LMP, at the local level, and analysed the nature of the evidence, its limitations and existing gaps. In a second stage, it developed a methodology for meeting this data gap, and for monitoring and evaluating these impacts in Lumbini, with potential applications at other heritage sites in Nepal and South Asia, but also more broadly at other religious and WHS worldwide. The discussion in Chapter 6 combined and integrated these two components to reflect on the impacts of the site development but also on the structural and organisational factors that have affected the social and economic benefits. This last chapter summarises and concludes on the results in relation to the thesis' five main objectives. The latter were to:

1) Review the social and economic development objectives of the LMP in its conception and preparation phases from the late 1960s until 1978;
2) Discuss the implementation phase of the LMP, between 1978 until present, in light of the social and economic objectives formulated in the conception and preparation phases;
3) Develop an analytical framework and methodological approach to evaluate the existing evidence for the social and economic impact of the site development. Based on this initial assessment, identify the main data gaps which would need to be filled to fully capture the socio-economic impacts of the LMP on local communities;
4) Present the results of new primary data collected in Lumbini between January 2017 and 2019 as a first step aiming at bridging some of the data gaps and strengthening the knowledge base for more data-informed policymaking in Lumbini;
5) Discuss the implications and limits of the results and the methodology, in the process of evidence-building in Lumbini and possible applications in heritage management and practice at South Asian and WH sites.

Moreover, the opportunities that arose during the research to compare the results in Lumbini with the application of components of the methodology at other sites in South Asia and other WHS provided additional, complementary material that the thesis has built on to better understand the implications and applications of the methodology and approach developed at Lumbini in other heritage contexts. This last chapter therefore reviews the key findings related to the five objectives listed above and how they have contributed to further the current understanding of the social and economic impact of the LMP, at the local level, but also to develop a methodology to improve this understanding through evidence-building, monitoring and evaluation processes. Ultimately, this chapter also concludes on some of the challenges encountered and what directions the thesis findings outline for future enquiries and academic research.

7.2. Research findings summary

The first objective of the thesis was to analyse the factors and dynamics that shaped the definition of the social and economic objectives of the development of Lumbini, between 1968 and 1978, but also how the latter were integrated within the LMP final design in 1978. Ambitious objectives were initially envisioned for the site development to act as the centre and driver of regional development plans for the Lumbini region (Section 2.4.1-3). However, the review of the LMP conception process, highlighted a variety of political, economic and social factors and complex dynamics between different stakeholders and regional development projects, closely related to the local, national and international context, that contributed to the redefinition of the scale of these objectives and restricted the scope of action to the LMP's one by three miles Project Area, with the exception of associated regional development, namely the Bhairahawa Airport upgrade and the construction of the Bhairahawa-Lumbini-Taulihawa road (Section 2.2-2.3). In the preparation phase, the social and economic objectives were not converted into the master planning process, with clear management objectives, activities, outputs and outcomes, within the LMP.

As per other international tourism plans at the time, the LMP focused on infrastructure development. It did not define measures to align the integration of the LMP with local economic sectors and with key priorities within local, regional and national policies and interventions. There were therefore limited linkages with national, regional and local development plans. During the preparation phase, the integration with regional plans was rendered particularly complex due to the multiplicity of actors and on-going projects in tourism development in Nepal, including in Pokhara and Kathmandu, and regional development in the area around

Lumbini and the wider Gandaki zone (Section 2.4.1). This context limited the resources available for the Lumbini project, but also the capacity to clearly define the role of the project within what were still unfinished and undefined regional policies and development plans. The LMP final design recommended to reconsider and review the activities and design to link the LMP more closely with these policies and development plans once finalised. However, it did not provide a framework, nor processes or resources to evaluate its implementation and make changes and adaptations based on the changing context (Section 2.4).

As an infrastructure planning document, the LMP gave little consideration to planning processes, management and monitoring and evaluation of impacts of the site development. By contrast, the scale of the designed infrastructure, the costs, and the short timeframe specified for the plan implementation, within a seven years' timescale, prompted the implementing agencies, the Lumbini Development Committee and later LDT, to focus on the implementation of the LMP physical components, including both extensive fundraising activities and infrastructure building. Despite the LMP's acknowledgment "*that priorities* [should] *be established so that the Lumbini Development Programme be integrated in the wider economic context*" (KTU 1978: 8), it provided little incentives or guidelines for implementing agencies. Conversely, the scale of the project certainly put strains on the limited resources. As a result, the recommended reviews and adaptations were never undertaken. The project was therefore never fully integrated in regional plans, while management processes were only recently reviewed and characterised in the IMF. Ultimately, the monitoring and evaluation of the LMP implementation was indeed almost solely based on the progress in delivering the infrastructure rather than on its impacts on local communities and the wider region. As a result, the LMP design contributed to isolating the site development from the immediate surrounding and regional development, by encouraging a focus on outputs and the completion of the physical components of the plan, rather than considering the wider impacts of site development.

This transition from conception and preparation to implementation was the main focus of the second objective of this thesis. The latter considered what repercussions the final design had on the site management and the social and economic objectives post-1978, but also how the LMP implementation affected the impacts of site development (Section 3.3). The observation made above was reflected, especially in the early implementation phases: the immediate delays following the LMP's approval by the Government of Nepal, the exponential increase in the cost of the project and the lack of resources represented the main challenges and focus of early activities. Limited steps were therefore taken towards linking the site development with the wider local and regional development, thus reducing social and economic objectives to

secondary concerns (Section 3.2.1). The Lumbini Development Act defining the mission of the LDT in 1985 also reflected this observation, with the mission and objectives of the LDT all related to the LMP implementation, primarily fundraising and finding resources and assistance to complete the different components of the LMP.

Beyond the management objectives, the management processes and structure also contributed to isolating the site from its immediate surrounding. The LDT has been under the Ministry associated to Culture, currently the Ministry for Culture, Tourism and Civil Aviation, and has therefore answered directly to the latter without any formalised connection or interaction in the management structure with local or regional administrations and stakeholders. Internal issues related to transparency, accountability and continuity within the core decision-making staff has also affected the implementation process, contributing to the local perception of the site, its management and staff as a top-down, foreign project, without much interaction, consultation or understanding of local economic and social concerns (Sections 3.2.1; 3.3). The site development and site managers were therefore seen as having limited understanding and interest to mitigate negative effects of site development, including early land acquisitions, or consider opportunities for the site development to engage with some of the local issues.

Indeed, the LDT corporate structure has been geared towards the objectives of its foundation Act, itself focused on the completion of the LMP, with therefore no division, section or resources dedicated to consultation of local or regional stakeholders or social mobilisation programmes. Its engagement in tourism or other development programmes has been driven by external motivations and resources available, namely international development agencies' poverty alleviation projects, including those led by UNDP TRPAP or ADB and WBG, or few other INGO and NGO-funded projects in Lumbini (Section 3.3). In the absence of management objectives and permanent resources coordinating these projects and activities internally and with the limited cooperation with local or regional administrations, these projects have not been integrated within any long-term management strategies. Moreover, the comparison of Lumbini and Chitwan National Park development and management (Section 6.3.3) suggests that the lack of review of management processes in Lumbini until recently has affected the opportunities to link projects and programmes with more permanent management framework and policies. This has affected their continuity and transparency, but also their monitoring and evaluation, notably in terms of their social and economic impacts for the beneficiaries.

Increase of tourism and pilgrimage activities was to be the main driver of positive social and economic impacts for local communities, as a source of foreign currency automatically coming

in the local economy. However, the LMP did not generate the expected increase in visitor numbers, partly due to the long delays in its implementation but also to the political, economic and social instabilities in Nepal, including the Maoist Insurrection between 1996 and 2006, the fall of the monarchy in 2008 and the subsequent transitional phase from a monarchy to a federal republic. In addition to the slow increase in visitor numbers, important market leakages were repeatedly mentioned as reducing the economic contribution of visitors to the site and the region (Section 3.4). These included short time spent by visitors in Lumbini and in Nepal in general, and their low spending locally. Limited monitoring and data on visitors and the tourism sector in Lumbini prevented a more in-depth understanding of the processes that affected the social and economic impact of incoming visitors. Unlike for the implementation of the LMP components, which was reviewed and adapted by the UNESCO/JFIT team between 2010 and 2013, there had not been prior to this thesis any review of the site implementation phase based on its social and economic impacts and therefore limited understanding of its impacts but also limited knowledge of the evidence available to evaluate them.

Objective 3 was therefore focused on developing an analytical framework and methodological approach to evaluate the existing evidence. The three dimensions of the framework, 1) economic, 2) social and 3) socio-economic, and the related indicators were based on both a thorough analysis of existing frameworks for evaluating the impact of heritage, culture and tourism, but also on the objectives defined in the conception and preparation of the LMP, in order to evaluate the implementation based on its original development objectives (Section 4.2.1). The evidence was analysed using a data gap analysis, focusing on the indicators and sub-indicators identified in the framework, to assess its availability, accessibility and reliability. The analysis was first used to determine the different sources where the required data to evaluate the local social and economic impact of Lumbini development could be available (Section 4.3). This process identified large data gaps which currently limits the possibility of monitoring and evaluating the longitudinal social and economic impact of the site development since 1978 but also its present contribution. They affected all dimensions of the framework, including economic, social and socio-economic indicators and originated from nearly all sources identified as part of the data gap analysis, including internal site documentation, public and administrative data at national, regional and local level, and third-party data collection results. They also covered all production sectors, including heritage management and the tourism sector, but also the supply chain, notably the construction and agricultural sectors.

Ultimately, the lack of evidence affected key social and socio-economic indicators related to education, cultural and social participation. For a number of data gaps, it was identified that

rapid assessment methods could provide a current perspective on the economic and social contribution of the site development and visitors on local communities living within the Municipality. For others, the gap-closing strategy required broader and more mid and long-term considerations. Integration in management processes and policies, both at the site level and in relation to partners and international, national and local stakeholders involved in projects associated to Lumbini development, would be a key factor in bridging the gaps. These partners include notably ADB and WBG but also UNDP and UNESCO all involved in the development of the wider GLA region and the Buddhist Circuit.

A primary data collection methodology based on rapid assessments, including interviews and focus groups with local stakeholders, visitor surveys and surveys of businesses, was developed to bridge some of the existing data gaps (Objective 4). The visitor survey was closely linked to economic indicators related to income generated from visitors and particularly visitor spending (Indicator 1.1.2). The results of the data collection provided evidence on visitors' spending patterns, by types of visitors, but also in relation to their activities in Lumbini and routes within the GLA and Buddhist Circuit (Section 5.2). Overall, the visitor survey was effective in starting to provide data to evaluate the income generated from visitors and in better defining the existing market leakages. The survey helped to identify some of the origins of the leakages linked to different visitor groups' practices and spending patterns as well as define the sectors that were affected by these leakages, including accommodation, restaurants, shops and independent tour guides (Section 5.2.3). Certain results were, however, not conclusive statistically for some of the relations between practice, group types and spending and would require further investigations.

The survey of businesses was used to bridge some of the gaps related to economic and socio-economic indicators, notably income and participation in the tourism sector locally (Section 5.1.3; 5.3). While the survey of businesses was less successful in measuring economic indicators and notably the income generated by the tourism sector in Lumbini, it was more successful in bridging the gaps related to socio-economic indicators related to local employment and participation of different communities and marginalised groups in the tourism sector (Section 5.3.3). Indeed, it highlighted complex dynamics within the sector which encouraged or deterred certain groups and communities' participation and the nature of their involvement. Business ownership and employment in the tourism sector shared some common determinants, but also significant differences which both suggested disparities in the level of participation of different communities and population groups overall and in different types of businesses, at different level of management. These results have contributed to identify factors encouraging or limiting the participation of these different groups and particularly marginalised communities who have

been the target of past and current poverty alleviation programmes. They suggested that determinants of both tourism business ownership and employment did not always support increased participation from marginalised groups among the local communities. The implications of these findings for on-going and future poverty alleviation programmes in Lumbini have been significant, as they have indicated existing gaps within current policies and actions.

The primary data collected as part of this thesis is currently the most complete dataset on visitors, their contribution to the local economy and the local tourism sector in Lumbini. Qualitative information collected through stakeholders and scoping interviews in the surrounding villages complemented and informed the design of the surveys but also the interpretation of the results. By combining this new data and information from interviews with a review of the long-term site development and management until present, the research offered a reflection on the role of planning and management at different level in generating or limiting economic and social benefits. Chapter 6 notably discussed the implementation of the LMP in isolation from local and regional development plans, for instance, and the consequences at every stages of the site development on local economic and social impacts. The implementation of Lumbini in isolation from local and regional development plans, for instance, has strongly affected at every stages of the site development the expected benefits from the project. The thesis argued that this isolation has had significant cost(s), related notably to missed opportunities to capitalise on the potential widespread social benefits of heritage and tourism recorded and identified at other sites, but also the economic losses and/or negative repercussions arising from this isolation.

Lumbini is not an isolated case study and recent research at heritage sites in South Asia and WHS and across the heritage sector have discussed in different ways the issue of site isolation and alienation of local communities. There is, however, no study that has provided a comparable dataset to the one collected in Lumbini linking the issues with visitors' contribution and their spending patterns. Therefore, the evidence from Lumbini has given unparalleled insights into the practical consequences of these lack of linkages between archaeological sites and surrounding communities, notably for the commercialisation of crafts, arts and cultural events and experiences, but also for the continuity of intangible heritage and local religious practices. More broadly, the thesis highlighted some of the implications of these findings for development policies and poverty alleviation programmes in tourism and heritage in Nepal and South Asia, but also more broadly for religious and WHS worldwide (Objective 5). By identifying barriers to development and poverty alleviation initiatives, the research informed possible responses and

identifies key factors for measures and interventions to focus on to increase economic and social impacts of heritage interventions. The process also enabled to identify evidence that would be needed to inform effective responses to existing issues and future initiatives.

7.3. Challenges and future directions

The main challenge for the thesis was the lack of data and the difficult access to existing evidence, split across different organisations and sources internally, within the LDT, but also externally within different local, regional, national administrative offices under different ministries. The data gap analysis process enabled to review all these sources, but despite the widespread data sourcing process, the evidence available and accessible has been insufficient to control, monitor and evaluate the social and economic impacts of the site development since the 1970s and the present impacts. This observation is particularly problematic in the current context where large-scale investments have already been committed to more developments at the local and regional level to promote a heritage-based development by facilitating access to the Buddhist heritage of the region to an increasing number of domestic and international visitors. Moreover, the current interventions have not been addressing these evidence gaps nor monitoring or evaluating the widespread direct and indirect social, economic and environmental impacts in Lumbini and the GLA.

The lack of systematic monitoring and evaluation of on-going developments at and around Lumbini has limited the possibility to develop evidence-based policies and intervene "*to avoid or mitigate the negative impacts and maximize the positive impacts that [these] projects are expected to create*" (O'Faircheallaigh 2009: 96). While insufficient to fully grasp the complex dynamics and determine all the various socio-cultural and economic factors at play, including in relation to environmental impacts, the results of the thesis highlighted a number of processes that undermined the local social and economic impacts of site management, tourism and pilgrimage activities in Lumbini, particularly for marginalised groups. Many of the issues identified were, however, not addressed by on-going projects and future plans for the site and the development of the GLA. Considering that the current projects have been funded through loans from development banks, with the objectives for Lumbini to become "*the catalyst for the sustainable development of the Historic Buddhist Region [GLA]*" and "*to facilitate strategies for poverty alleviation of the local communities*" (Weise 2013: 8), these results have significant implications for the management of on-going interventions and future planning.

The results indicated that interventions in Lumbini, and other initiatives which have used heritage as a driver of development and community empowerment, should integrate specific

actions and policies to foster the inclusion of marginalised communities in the process. While there have been some initiatives in Lumbini and elsewhere in the GLA to increase participation of local communities, particularly women and indigenous and low caste populations, they have often been short-lived and struggled to continue after the completion of the projects. The different projects have repeatedly faced similar issues linked to their isolation from the tourism sector and weak linkages. However, the latter have not been addressed in the most recent projects, including the *Hariyali Hastakala* women's group stall in Tilaurakot-Kapilavastu or the Tharu Museum in Lumbini Cultural Municipality. There is therefore a need to better understand the roots of existing leakages but also the main drawbacks and encouraging factors for the participation of marginalised communities and population groups in the tourism sector. The data from the survey of businesses, for instance, suggested certain socio-cultural factors at play, most likely linked to economic and educational factors but also to existing community networks which encouraged or limited participation in the tourism sector.

While the data collected as part of the thesis on visitor spending patterns began to provide insights in factors affecting demand, there is still a limited understanding of the latter and therefore of possible measures to adapt the offer to commercialise various local products to different visitor groups and market segments. The thesis started to identify different visitor groups associated with certain practices and spending patterns, although these patterns were not as well understood for religious visitors and pilgrims or for Asian visitors, for instance. Moreover, the results on visitor spending suggested that a better understanding of the interests and motivations for 'out-of-pocket' purchases (Mitchell and Ashley 2010: 46) would inform policies to strengthen the links with local communities which has been a shared issue across many sites in South Asia and other WHS. The outcomes confirmed but also identified new market leakages that affected the economic contribution of visitors locally. It also defined more clearly the roots of these leakages, notably linked to the current demand but also to local participation in the existing tourism offer. These types of analyses are critical to inform the on-going development of the site and more broadly the Buddhist Circuit, as they provide evidence to develop policies and measures targeted at issues within the existing offer, including strengthening local market linkages in key sectors, and at developing an offer that is more adapted to the demand of visitors, tourists and pilgrims.

More broadly, the approach developed at Lumbini has the potential to contribute to the management of other sites facing similar issues related to market leakages and integration of local communities, notably marginalised groups, in the heritage and tourism sector. Among them are other sites within the GLA, including Tilaurakot-Kapilavastu which is currently the focus

of an international mission and seeing a rapid increase in visitor numbers, notably pilgrims and religious visitors from South East and South Asia. These issues of poor connectivity and participation of local communities in heritage have also been raised elsewhere in the Buddhist Circuit (Kumar and Kumar 2009; Rodriguez 2017), or at Sigiriya WHS, Sri Lanka, for example, where the researchers closely linked the issues with the site governance and management (Weerasinghe and Schmidt 2017). The thesis has initiated reflections on the factors contributing or undermining the development of linkages and bridges between site managers, local actors, communities and the visitors. In the cases mentioned above, for instance, there has often been a limited understanding of the demand from different visitor groups for various cultural products and experiences.

Moreover, while tourism research has focused on handicraft commercialisation and commodification, there is still a gap to better understand in a heritage context the links between site presentation, interpretation, community engagement in site management and the commodification and commercialisation of local products for visitors. The case of Lumbini notably tends to point out links between the latter and the way heritage values are formulated, presented and interpreted for visitors. The thesis has argued that the visitors' lack of exposure to local communities' history, culture and the local values associated with Lumbini, has affected their spending patterns, notably for shopping, as they do not relate their travelling experience with the local crafts, productions or cultural experiences, like village tours, that have been promoted outside the LMP.

Ultimately, the research has been conducted in collaboration with local stakeholders and findings have potential implications for the development in the GLA. Therefore, the dissemination of results and continuous engagement and discussions with the different local stakeholders will form an important aspect of future work and forms part of the ethical considerations of the thesis (Section 4.5.4). Some of the results have already been disseminated at the International Scientific Committee for the UNESCO/JFIT *Strengthening Conservation and Management at Lumbini World Heritage Site* project's annual meeting in March 2019 which brought together all key stakeholders. The approach will involve continuing to share results with informant and organisations through Durham's UNESCO Chair project workshops and outputs in the GLA, with illustrative data being anonymised in any public dissemination or future publications.

7.4. The significance of the thesis and implication for future research

This research has come at the junction of multiple fields, which have been the focus of attention from different international, national and sector-specific stakeholders. The research was closely linked to the social and economic role of culture and heritage which have been extensively discussed since the 1980s (Labadi 2008; Licciardi and Amirtahmasebi 2011; Rizzo and Mignosa 2013; Greffe and Pflieger 2005). The economic and social impact of tourism, especially international tourism, has also been widely debated in the academic literature and a contested issue among the different actors and stakeholders (UNWTO 2015; Timothy and Nyaupane 2009; Sharpley and Telfer 2015). These discussions have mainly focused on what to measure and the analytical tools to evaluate impacts, with the goal of finding common frameworks. The thesis has bridged a gap in these discussions by focusing on assessing the availability, accessibility and reliability of the existing data, on which evaluations are based, and considering strategies to build reliable evidence for monitoring and evaluating impacts at site level. The application of the methodology in Lumbini and the pilots conducted at various sites in the GLA and South Asia has highlighted the additional observations that can be made from closing the data gap, their implications for heritage site management and therefore the potential of this approach for informing heritage policies and interventions to maximise positive impacts and reduce negative effects.

Data gaps have been a broad and shared issue across the heritage sector, at international and national level in developing and developed countries, but also at site level. The limitations in the available and accessible data has affected the ability to effectively measure the social and economic impact of development and tourism at individual heritage sites. The data gap analysis process, applied for the first time in this thesis to a heritage context, enabled to identify what the gaps were but also where they originated from. Understanding the origin(s) of the evidence gaps has been particularly important in order to define strategies to address the gaps and reduce them for more effective impact evaluations. This consideration is important at site level but also has applications at national and international level in developing as well as developed countries.

The sources and origins of the data gaps have a significant impact on the possible measures and strategies that can be adopted to bridge them. Some gaps can be compensated or bridged through internal data collection, which requires to allocate funding and resources for this purpose. But for other gaps, the perspective of closing them may be more long-term and involve reconsiderations of managerial processes, including internal organisational factors, developing

internal expertise and skills, but also policies towards collaboration and data-sharing with other stakeholders and partners. The process of the data gap analysis and the results, therefore, provided critical information regarding what data was missing but also the source or origin of the gap which could then inform stakeholders on the measures that would be required to close it. It has been closely related to current issues in heritage studies and management and to the on-going process of creating shared international frameworks for evaluating the impact of heritage, but also evidence-based approach to individual site management.

Potential applications of the approach and methodology require adaptation to specific contexts, including in determining the scope, identifying the sources available and developing a data gap-closing strategy. Its application in a heritage context as a foundation for monitoring and evaluating social and economic impact of heritage thus brings additional challenges. While for economic impact, the implications in the heritage context have been primarily related to determining the economic cost related to displacement of activities, i.e. ban of certain economic activities within or around archaeological sites, for social impacts the implications have been more significant. The influence that heritage values can have in determining to a certain extent the evidence-building for social indicators introduces ethical issues related to the definition of these values. While the study of a single site, like Lumbini, is insufficient to define the boundaries of that core element, the results from current international initiatives to standardise data collection on culture and heritage social and economic impact including the UNESCO Culture for Development Toolkit have the potential to define them more clearly. Moreover, further research, especially testing and piloting similar frameworks and approaches at different sites, will also contribute to develop effective evidence-building in heritage to strengthen social and economic impact evaluation within the sector.

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APPENDICES

List of Appendices

APPENDIX 1: List of components of the Lumbini Master Plan by Zone and estimated costs (KTU 1978)

Component	Estimated Cost
<u>Cultural Zone</u>	
1. New Lumbini Centre	
• Administrative centre (north Wing)	180,000
• Medical centre (north Wing)	90,000
• Retails and service facilities (police post, banks, bus and taxi services, shops and restaurants)	180,000 90,000
• Tourist information centre	115,200
• Colonnades	n/a
• Overbridge (to cross the Bhairahawa-Taulihawa road)	
2. Cultural Centre	
• Museum	135,000
• Audio-visual Room	n/a
• Laboratories	n/a
• Library	n/a
• Auditorium	216,000
• Research Institution with Accommodation for Scholars	n/a
• South Pond	107,800
• Colonnades	63,000
3. Pilgrim Accommodation	
• North Pond	172,800
• Upper-class tourist hotel	n/a
• Middle-class tourist hotel	253,750
• Cheap-type pilgrimage lodging	82,500
• Camping area	n/a
4. High School	130,500
5. Staff Colony	n/a
<u>Central Link</u>	
1. Central Canal with boat stations	1,636,900
2. North and south end pavilions	n/a
3. Meditation Areas (2 meditation centres at either side of the central canal)	n/a
4. Lumbini Squares 1 and 2	n/a
<u>Monastic Zone</u>	
1. West Monastic Zone (29 plots for Mahayana sects)	n/a
2. East Monastic Zone (13 plots for Theravada sects)	n/a
3. Monastic Plaza (symbolic pavilion and landscaping)	n/a
4. Courtyards	n/a
<u>Sacred Area</u>	
1. Pond area	n/a
2. Administrative complex (offices, archaeological surveyors, public lavatories, emergency room)	n/a
3. Removal of modern buildings (stupa-shaped earth mounds, old rest house, new Buddhist monasteries, high school, post office, Mahendra Pillar, Malaria eradication centre, dispensary, Lumbini Bazaar)	n/a

General Components	
1. Water management	2,106,100
2. Site work and landscaping	6,155,000
3. Architectural work to be conducted in Phase 2 (1980-1985) (no details by components)	2,423,450
4. Utility work	2,420,000
• Power Supply	736,000
• Telecommunication	539,000
• Water Supply	155,000
• Drainage and Sewage	354,000
TOTAL	**19,560,000**

APPENDIX 2: Transcription of the Letter of F.E. Okada, Advisor in Regional and Community Development, to Y. Joury, UN Representative to Nepal (May 1970)

Memorandum

Confidential

Date 22 may 1970

To: Mr. Yacoub Joury, Residential Representative of the United Nations in Nepal
Through: Mr. R.V. Issinski, Deputy Resident Representative
From: Mr F.E. Okada, Advisor in Regional and Community Development
Subject: The Lumbini Project

After talking with Mr. T.D. Dissanayake, AAR, on 19 May 1970, regarding the Lumbini Project, I feel like my impressions should be given in a more organized fashion for the sake of clarification.

My impression is that there is an unenthusiastic attitude on the part of the Government of Nepal towards the Lumbini Project as reflected by the fact that:

a) All discussions, even informal, relating to the development of Lumbini have had to be initiated by me
b) There is no central body or person […] with overall responsibility for the Lumbini Project with whom discussions can be held. One has to talk separately with a number of people all vaguely and partially involved.
c) The two most senior officers with direct responsibility for the development of Lumbini are neither of them very high in government hierarchy and they are limited in range of operations (i.e. panchayat development, agricultural development, even road-building are not within their province). [the two being the Chief Engineer in the Department of Housing and Physical Planning and the Director of the Department of Archaeology]
d) Remarks made by people at higher levels indicate hesitancy, e.g. 'We will do it (the Lumbini Project) if we are forced to by United Nations'. I might add that this and further remarks quoted were said frankly and informally and without any personal rancor.

This attitude has several intertwining reasons:

a) Economic
   - Scarce manpower, finances and commodities are assigned in relation to development priorities as seen by Nepal, among which Lumbini ranks low. This is indicated by such remarks as: "Pokhara development is more important (than Lumbini)" – "Please don't ask me for anybody (to work in Lumbini); I have nobody to spare" – "It (the Lumbini Project) will cost us too much".
   - A doubt exists that there will be enough tourist interest, as different from pilgrim interest, to make the project economically worthwhile
b) Political

   What these reasons are I am not sure but they seem to relate with local and national politics and with religious and social attitudes. I have been told, "There are political reasons" but nobody has explained what they are

c) Religious

These appear to be a reluctance to encourage Buddhism in a Hindu state. Buddhism is considered a minor and minority religion in Nepal and there is little awareness of its extent or importance in other Asian countries. Perhaps there is also a feeling that encouragement of Buddhism governmentally will result in its political strength nationally.

d) Social

Hinduism is the prestige religion and there is a tendency to take on its social and ritual toppings [?] and eventually a sincere belief on the part of ethnic groups originally Buddhist. Most Buddhist are now squatted with Bhote (Tibetan, and by extension Tamang and other groups, predominantly Mongoloid, considered low in Nepalese caste hierarchy). Thus social nuances also help influences GON attitude to the Lumbini Project.

Factors Favouring the Lumbini Project.

a) An interest shown in the project by a number of individuals and groups is a positive factor which perhaps can be turned into active support. They are
   - Buddhist individuals (including at least one member of the National Panchayat) and organizations in Nepal. They, however, do not wish to press too hard for fear, rightly or wrongly, of a Hindu backlash
   - HRM the Crown Prince, whose office has asked me for information and reports on Lumbini.
   - Businessmen. I have received queries, all of which had to be fielded with care on possibilities of starting a bus service of building a hotel in connection with the Lumbini Project
   - The people of Lumbini, Hindus and Muslims both, who see Lumbini Garden as a sacred spot. Its development, if Buddhism is not rammed down their throats, would be seen as a general religious act, not a specific Buddhist one. They also expect to derive economic benefit from a development scheme both directly (employment) and indirectly (roads, water, schools, etc.).

b) Some individuals, in and out of GoN, have given consideration to my emphasis on:
   - Long-range international, particularly Asian, political benefit to Nepal accruing through the honouring of the Buddha's birthplace.
   - Integrated socio-economic development of the Lumbini area as a component of regional development, using fully the resources and organisations now available to set the area on the road to self-sustaining growth; when the Lumbini project is implemented, the people will be in a better positing to cope with, and exploit, it to maximum advantage.

c) Not to be overlooked is the fact that the Buddha has a place in the Hindu pantheon and is considered to be a divine manifestation of Vishnu – as is HM King Mahendra. This the Buddha is acceptable and more than acceptable to Nepalese Hindus even if Buddhism is generally held in less than high esteem. Additionally, there is a precedent for honouring birthplaces of deities, e.g. the great temple dedicated to Sita, the wife of Rama at Janakpur, her birthplace, which gives a religious focus and raison d'être for the town.

Summed up the majority of GoN attitude at best appears to be: If the UN wants to do all the work and provide all the finances and trained personnel, we won't stand in the way of the project, but we cannot afford to ask for it, nor contribute to it or its future maintenance. It is not important to us.

On the other hand, advocates of the Lumbini Project have certain strong cards to play. One important step, however is to persuade GoN to establish or designate a body with which discussion can be held. This body should have a membership which is highly-place, broad-based and limited enough to be effective in initiating and sustaining action. HRM the Crown Prince might be the logical person to heed such a body

c.c. Mr K.K. Tsien, SAFE/DTC

APPENDIX 3: Chronological table of key political events in Nepal, history of migration in the Tarai and Lumbini modern development

Periods/dates	National Political Events	Tarai Migration History	Lumbini Development
1846-1950 **Rana period**	The Rana family of hereditary Prime Ministers in power	Small wave of migration of North Indians in the Nepali Tarai looking for land and employment Migration from the Hill regions of Nepal low, mainly absentee landlords and functionaries	Archaeological rediscovery in 1896 Early excavations (Mukherji 1899) and beautification work (Shamsher 1933-1939)
1951-60 **Democratic transition**	1951 King Tribhuvan overthrows the Ranas with support from India and political parties; 1956 Death of King Tribhuvan; Coronation of King Mahendra 1959-60 General elections, but government dissolved by the King a few months later	Start of the malaria eradication programme (1955-1968) Progressive increase of migration from the Hill regions of Nepal	In preparation and following the *Fourth General Conference of the World Fellowship of Buddhists* in Kathmandu King Mahendra built basic infrastructure and facilities
1960-79 **Panchayat System**	1962: New Constitution establishing the Panchayat System 1964: The Lands Act	Eradication of Malaria, mass migration and forest clearance intensification 1964: Nepal Resettlement Company is created 1968: Creation of the Department of Resettlement Early resettlement of Nepali 'diaspora' refugees in the Tarai (i.e. Burma, India)	Preparation and conception of the Lumbini Master Plan, after the visit of U Thant Un General-Secretary in 1968 Initial land acquisitions for the project
1979-90 **Reformed Panchayat System**	1979-80: Referendum on the Panchayat system and victory of the reformed Panchayat over multi-party democracy 1989: Indian Trade Embargo followed by the 1990 revolution putting an end to the Panchayat System;	Continued migration from the Hill to the Tarai and resettlement of Nepali 'diaspora' refugees	Major land acquisitions Initial implementation (based on LMP phasing, phase 1 should have been completed by 1985)
1990-96 **Second Democratic Transition**	Multi-party democracy	Lower internal migration rate to the Tarai region, except in Western regions where rate remains high	Continued implementation period Excavations in the Maya Devi Temple by the Japanese Buddhist Federation

	National Political Events	Tarai Migration History	Lumbini Development
1996-2006 Maoist Insurrection	Government in conflict against Maoist groups 2002: Royal family massacre; Coronation of King Gyanendra	Decrease in the scale of internal migration in the whole Tarai region with lower migration rates in most districts	1997: World Heritage Listing Lumbini 1998: First World Buddhist Summit in Lumbini 2001-2: Construction of the modern shelter over the remains of the Maya Devi Temple 2004: Second World Buddhist Summit in Lumbini Visitor numbers increasing after 2002
2006-2008 Abolition of the monarchy	2006: End of conflict with Maoist groups 2008: Abolition of monarchy		Visitor numbers start increasing more rapidly from 2008
2008-2015 Transition period	April-May 2015 Gorkha Earthquake destabilising the country Nepal Constitution signed on 20th September 2015 Instabilities in the Tarai and blockade at the Indian border organised by dissent groups in protest against the new Constitution		2010-2013: UNESCO-JFIT project Phase 1 in Lumbini 2013: Final draft of the Integrated Management Framework presented to Government of Nepal (awaiting approval) 2014-2017: UNESCO-JFIT project Phase 2 in Tilaurakot-Kapilavastu
2016-2018 Parliamentary Democracy	Implementation of the Constitution Administrative reorganisation with creation of the new provinces		Final phases of LMP implementation Upgrading of transportation infrastructures including the Bhairahawa-Lumbini-Taulihawa road and Bhairahawa airport

APPENDIX 4: Lumbini Master Plan Implementation Chronological Sequence

Site development activities in Lumbini after 1967 until 1996	
Phases of Implementation	Activities, Infrastructure and Facilities undertaken
Lumbini Master Plan Preparation phase (1967-1971)	- Test-well drilled to provide drinking water to pilgrims and residents with a capacity of 100 000L per hour - Upgrading of Bhairahawa/Siddharthanagar airport started - Construction of the Dharma Swami Maheraya Buddha Vihara (in Sacred Area) (1969-1975) - Archaeological investigation of Lumbini Game (ancient village) (1970/1)
Lumbini Master Plan Conception phase (1972-1978)	- Construction of the Bhairahawa/Taulihawa road underway - Upgrading of Bhairahawa/Siddharthanagar airport underway - Acquisition of the 3 square mile land of the Sacred Garden - Planting started in the Sacred Garden area - Soil tests undertaken in preparation of infrastructure construction - On-going DoA/LDC archaeological investigation project in Sacred Garden
Lumbini Master Plan Early Implementation (1978-1985)	- Completion of the Bhairahawa/ Siddharthanagar Airport upgrade - Completion of the approach road to Lumbini from Bhairahawa - Partial completion of periphery road - Completion of basic works on infrastructure, including Road, Electricity, telecommunication, sewage - Report on the Soil Investigations by KTU - Work started on drainage systems - Completion of the land acquisition in the 1x3 mile area - End of DoA/LDC archaeological investigation project in Sacred Garden (1985/1986)
Lumbini Master Plan Implementation under the LDT (1986-1996)	Cultural Zone - Pilgrim Accommodation (Government of Sri Lanka) - Library (Reiyukai, Japan) (1989) - Museum (Government of India) (1989) - Completion of high-end accommodation (Hokke Hotel, Japan) (1996) - Completion of Lumbini International Research Institute (Reiyukai, Japan) (1993) - Crane Sanctuary (not in Lumbini Master Plan) (1994) Monastic Zone: - Panditarama Meditation Center, Myanmar (completed in 1995) - Sokyo Temple (started in 1993 – currently interrupted) - Korean Mahabodhi Society Temple of Korean Buddhist Chogye Order (1995- on-going) - Linh Son Buddhist Monastery (1993- on going) - Mahabodhi Society, Calcutta (1994-1997) - Government of Myanmar (1993-2000) - International Viskchhuni Sangh, Nepal (1994-2000) - Royal Thailand Monastery (1994-after 2000) - Buddhist Association of China, China (1996-2000) - Government of Sri Lanka Monastery (1996-inaugurated in 2009 but still minor construction work on-going) Sacred Zone: - Archaeological excavations and conservation work (JBF/DoA/LDT) (1992-1995) Other: - Digging of the Central link started (World Food Program)

Site development activities in Lumbini from 1997 until present	
Phases of Implementation	Activities, Infrastructure and Facilities undertaken
LMP Implementation following World Heritage Listing (1997-2007)	Cultural Zone - Completion of accommodation for research scholars (Reiyukai, Japan) - Construction of the World Peace Pagoda, Nipponjan Myohji (Fuji Guruji) (not in Lumbini Master Plan) (1999-2001) - Construction of Water Tower (10000L capacity) (2004/5) - Construction of 15 souvenir shops, restaurant and toilet in the parking area (2006/7) Monastic Zone - Tara Foundation Duesseldrof, Germany (1999-2004) - Drigung Kagyud Meditation Center, Ladakh (1999-2004) - Drubgyud Chhoeling Monastery (Nepal Mahayana) (1999-2001) - Geden International Monastery (Austria) (1999-2011) Sacred Zone - Construction of the modern Mayadevi Temple (not in master plan) (2001-2002) - Construction of 3 (of 4) ponds in Sacred Area (2003-2007) Other - Construction of the Master Plan boundary wall started (2004) - Construction of pedestrian path for the central canal (2006/7)
LMP Implementation Current phase (2007-present)	Cultural Zone - Completion of mid-range accommodation (Hotel Kasai, formerly Mikasa) (1991-2009) - Completion of current LDT office building (2007/8) - Completion of current Information section office (2007/8) - Construction of new LDT office buildings and Visitor Centre (partially open in early 2019) - South Pond - Donation of a Baby Buddha statue erected before the bridge leading to the Sacred Area in the central axis (not in master plan) (2013) - U-Thant Auditorium (on-going in early 2019) - North Pond (on-going in early 2018) Monastic Zone - United Tungaran Buddhist Foundation, Nepal (2006-2011) - Urgen Dorjee Chholing Buddhist Centre, Singapore (inaugurated in 2011 but still minor construction work on-going) - France Buddhist Temple (Association Lumbini Shechen Stupa) (inaugurated in 2010) - Karma Samtenling Monastery (completed in 2012) - Thrangu Monastery (Buddhist Canadian Association) (2010-2014) - Phat Quoc Tu Vietnam (1993-completion planned for 2017) - Manang Sewa Stupa (2001-inauguration planned for 2017) - Manang Sewa Samiti Monastery (1999-completion planned for 2017) - Dhamma Janani Vipassana Meditation Center (2000-tbd) - Cambodian Monastery (started in 2010) - Ka-Nying Sedrup Monastery (Seto Gumba), Nepal (started in 2011) - Zarong Tgupten Mandol Dogna Chholing, Nepal (started in 2012) - Nepal Vajrayana Maha Vihara, Nepal (started in 2012) - Mahasiddha Sanctuary for Universal Peace (started in 2014 – currently interrupted) - Nepal Theravada Buddha Monastery (started in 2015) - Bodhi Institute (Canadian Engaged Buddhist Association) (started in 2013) Sacred Zone: - Fencing around the Mayadevi Temple Area (not in master plan) (2007/8)

	- Demolition of previous Lumbini Development Trust office in the Sacred Garden (2007/8) - Construction of toilet facilities within the Sacred Area (2007/8) - Completion of the Sacred Garden LDT information centre (2011) - Construction of brick-paved pathway and meditation platforms (2010/2011) - Circular Pond completed (2011) - UNESCO-JFIT Conservation of Marker Stone and Mayadevi Temple remains (2011- on-going) - UNESCO-JFIT Conservation of Asokan Pillar (2010- on-going) - 108 thousand trees planted in the Buffer Zone of the World Heritage Property (within the levee) (not in master plan) (2011) - Indian Prime Minister planted a sapling of Bodh Gaya Bodhi Tree in Sacred Area (not in master plan) (2014) - Archaeological office (completed in 2014) - Staff Colony Completed - Circular road with circular drain (on-going) - Demolition of Police station (formerly the old pilgrim rest-house) (2018) Other - Construction of bridges over the central canal (2007-2010) - Establishment of Lumbini Buddhist University (not in master plan) (2006) - Completion of central Canal (2011) - Construction of an Information Centre, donated by the Thai Monastery, south of the Dhamma Janani Vipassana Meditation Center (East side of canal) (not in master plan) (2014) - Water tower (under construction in early 2018)
Components not started by 2018	Cultural Zone - Medical Center - High School Complex - Security - Post & Telephone - Banks - Camping Ground Monastic Zone: - All plots leased, but not all construction started, and one monastery currently abandoned (Sokyo) - Secondary pedestrian path Sacred Zone: - Removal of King Mahendra Pillar - Removal of the two monasteries in the Sacred Garden to plots in the Monastic Zone Other - Drainage for service road - Telecommunication (there is one telecommunication tower in the Sacred Garden but it is currently seen as affecting negatively the presentation of the World Heritage site and requests have been made to remove it) - Water supply system - Sewage system and treatment plan

APPENDIX 5: LMP design tourism planning figures

Visitor number evolution and forecast, based on KTU reports and Okada (1970) Economic and Social Survey of the Lumbini Garden Area

Visitor Number to the Sacred Garden in the mid-1960s (Source: Okada 1970b: 44)	
Year	Number
1964	1023
1965	573
1966	834
1967	198 (only Oct-Nov)

Foreign tourist arrivals in Nepal between 1970 and 1976 and predicted evolution by 1980 and 1985, based on the average annual increase of 15% (adapted from KTU 1978: 10-11)		
Year	Number of arrivals	Index
1970	45970	100
1971	49914	109
1972	52930	115
1973	68047	148
1974	89838	195
1975	92440	201
1976	105108	229
1980	185800	404
1985	373500	812

Foreign tourist arrivals by mode of transportation between 1970 and 1975 and predicted evolution by 1980 and 1985, based on total number estimate and an average of 20% of land travellers and 80% of air travellers (adapted from KTU 1978: 10-11)				
Year	By air		By land	
	Number	Proportion	Number	Proportion
1970	36508	79%	9462	21%
1971	40369	81%	9545	19%
1972	42484	80%	10446	20%
1973	55791	82%	12256	18%
1974	74170	83%	15668	17%
1975	78995	85%	13445	15%
1980	148600	80%	37200	20%
1985	298800	80%	74700	20%

Estimated number of visitors in Lumbini by 1980 and 1985 (adapted from KTU 1978: 12)	1980	1985
Foreign Tourists in Lumbini	44700	89700
Tourists in High Season	31300	62800
Tourists in Low Season	11200	22400
Daily Average in High Season	208	418
Daily Average in Low Season	75	150
Daily Average of Over-Night Tourists in High Season	156	314
Daily Average of Over-Night Tourists in Low Season	57	113

APPENDIX 6: List of factories in Rupandehi District in 2007 (Giri 2007: table 1)

No	**Name of Factory**	**Address**	**Openin g year**	**Dist. from Lumbini (km)**	**Dist. from main road (m)**
1	Siddhartha Flour Mill	Gonaha VDC - 6	-	13.3	25
2	Siddhartha oil mill	Gonaha VDC - 6	-	13	20
3	Shyam Vinayala Ind.	Gonaha VDC - 6	-	13.5	400
4	Siddhartha Cement Ind	Gonaha VDC - 6	-	13.4	100
5	Supreme Cement Ind	Kamhariya-6	2001-2	13.4	300
6	Kailash Cement Ind	Kamhariya-6		13.4	400
7	Shyam Plywood Fac.	Kamhariya-6	-	13.4	600
8	Ambhuja Cement Ind	Kamhariya-6	-	13.4	650
9	Hira Brick Factory	Kamhariya-6		13.4	700
10	Hira Cresar Ind	Kamhariya-6		13.4	750
11	Jagadamba Cement Ind	Gonaha-7 Parsahawa	2000-1	13.3	10
12	Brija Cement Ind	Gonaha-7 Parsahawa	2000-1	13.3	20
13	Jagadamba Synthetic Ind	Gonaha-7 Parsahawa	2001-2	13.2	20
14	Buddha Paper and Pulse Mills	Kamhariya-6	2000-1		
15	Triveni Distillery	Kamhariya	1995-6	9.8	300
16	Instant Mill Pvt Ltd	Kamhariya		11.5	10
17	Himalayan Noodles	Kamhariya-6	-	11.3	100
18	Wood Mill	Kamhariya-6		11.5	10
19	Relliance Paper Mill Pvt Ltd	Kamhariya-6		10.5	350

20	Reliance Cement Ind.	Kamhariya-6		10.5	400
21	Jagadamba Spining Mill	Kamhariya-6	-	12	20
22	Siddhartha Bricks and Tiles Fac.	Siddharthanagar/ Bhairahawa		19.4	400
23	P.C. Brick Fac.	Siddharthanagar/ Bhairahawa		20.5	300
24	Varsa Engineering	Siddharthanagar/ Bhairahawa		21	20

APPENDIX 7: Estimates of the economic contribution of visitors in the Greater Lumbini Area provided in the WBG-funded consultant reports

Breakdown of estimated visitors' daily expenditure in Lumbini area average 2012-13 (calculated at $1 = NRs.85) (adapted from ETG 2013: table 4-5)

Spending Category	Domestic	Indian	Third countries
Accommodation (overnight visitors)	3.52	5.88	14.11
Accommodation (day-trippers)	0	0	0
Meals (overnight visitors)	5.88	3.52	9.41
Meals (day-trippers)	2.35	1.40	5.641
Travel and local transport (all visitors)	3.52	17.64	23.52
Attraction and activities (all visitors)	1.17	2.35	3.52
Cultural events and entertainments (all visitors)			1.17
Handicraft and souvenirs (all visitors)	1.17	2.35	5.88
Others (all visitors)	0.58	0.94	5.88
Total daily expenditure (overnight visitors)	15.88	32.70	63.50
Total daily expenditure (day-trippers)	8.79	24.68	45.61
Average of all three types (overnight visitors)		37.36	
Average of all three types (day-trippers)		26.36	

Local retention of tourism benefits from different types of tourists in Lumbini sub-cluster (Source: TRC 2013: table 9)

Visitors	**Day excursionist or overnight stays**	**Per visitor per day average package cost (USD)**		**Local retention* % (by air)**	**Local retention* % (by bus)**
		By Air (from KTM)	By Bus (from KTM)		
Domestic	Day excursionists	125.60	44.61	7.0%	19.7%
	Overnight stay	132.69	51.70	12.0%	30.7%
Indian	Day excursionists	141.49	40.68	17.4%	60.6%
	Overnight stay	149.71	48.70	22.0%	67.1%
Third country visitors	Day excursionists	322.31	95.96	14.1%	47.5%
	Overnight stay	340.20	113.85	18.6%	55.8%
Total Average		**202.00**	**65.91**	**15.1%**	**46.9%**

* local retention refers to Lumbini sub-cluster which includes Lumbini itself and Bhairahawa

APPENDIX 8: Data gap analysis process summary

Sources consulted and evaluation of data availability, accessibility and reliability by indicators

Appendix 8.1: Data and sources consulted for the data gap analysis

1. Administrative data

Sources	Monitoring and evaluation data	Data collection method
Central Bureau of Statistics	National Population Censuses (1971-2011) National Account reports and data for 'hotels and restaurants' economic activities Sector-specific surveys, i.e. Hotel and Lodge Survey 2003/4	Consultation of online resources Online requests for information (data, documents)
Nepal Ministry of Culture Tourism and Civil Aviation (including Nepal Tourism Board)	Registered hotels/guest houses and other tourism businesses Tourism business revenue data (based on foreign exchange earnings Tourism business employment data (based on Tourism Employment Surveys)	Consultation of online resources Online requests for information (data, documents) Visit to Bhairahawa Tourism Board Office
Nepal Rastra Bank	Reports on economic contribution of tourism Tourism revenue data, based on foreign exchange earnings	Consultation of online resources Online requests for information (data, documents)
Ministry of Industry (including Small Cottage and Industry Office and Commerce Office)	Business registration lists Business Surveys Sector-specific surveys (national level)	Consultation of online resources Visit to Bhairahawa (Rupandehi) offices (x1)
Ministry of Finance (including Inland Revenue Office)	List of taxes paid by tourism businesses Annual tax revenue for tourism sector (hotel and restaurant) in Lumbini and/or Rupandehi	Consultation of online resources Reports from international organisation
Lumbini Cultural Municipality	Local population profiles Local industry and commerce data Local production data Local tax revenues (total and share of tourism sector)	Consultation of online resources Visit to Municipality office and to ward secretaries (x3)

Hotel Association Nepal (local branch: Siddhartha Hotel Association Nepal)	List of registered hotels/ guest houses (members of association) Additional documentation available on local establishments	Visit and information request to President and General Secretary of SHAN Lumbini branch
Rupandehi Chamber of Commerce and Industry	List of registered hotels / guest houses Additional documentation or studies available	Consultation of online resources Visit to Chamber of Commerce and Industry and interview with staff Request for information and documentation available
2. Site Manager		
LDT Administrative Office	Employment data Budget and revenue data LMP Businesses data Data on monasteries (employment, rent, guest house size, data on guests, etc.)	Visit administrative office and interview and request made to administrative officer
LDT Information Office	Visitor numbers Ticket revenue Lumbini cultural and religious program	Consultation of online resources Visit to ticket office and interview with officers
LDT Museum	Museum Visitor numbers	Visit to Museum and request made to Museum officers
Lumbini Darpan and other LDT publications	LDT spending LDT revenues LMP Contractors Visitor data Lumbini cultural and religious program	Review of publications
3. Surveys/Rapid assessments/studies (researchers and consultants)		
International organisations (UNESCO, UNDP, UN, ADB, WB/IFC, etc.)	Nature of research undertaken Review of LMP implementation Tourism research/mission results Project reports	Consultation of online resources UNESCO Publications UNESCO Archives (digitised material) Requests for consultant reports Tribhuvan University Library and other libraries

CBOs/NGOs (i.e. IBS, LSSF, etc.)	Lumbini Cultural Heritage Magazine (IBS publication)	Consultation of online resources
	Brochure/Leaflets	Consultation of resources/ publications available locally
	Activity reports	
	Darpan magazine reports	
Other resources	Academic research on Lumbini communities, LMP and/or tourism in Lumbini	Consultation of online resources
	Published books or papers	Consultation of published books
	Unpublished literature (i.e. PhD thesis, masters, thesis, etc.)	Tribuhvan University Library and other libraries
		Ancient India and Iran Trust Archives (Allchin's working papers and photographic collection)

Appendix 8.2 : Data gap analysis for economic indicators and sub-indicators		
Economic Indicators and sub-indicators	Sources consulted	Evaluation
1.1.1. Visitor Numbers	LDT	Data available for foreigners since 1994 and for Nepali and Indian visitors since 2010
1.1.2. Visitor Spending per person per group (including total and by type of expenses)	One study based on 50 respondents, etc conducted in 2011. Coningham et al (2013) visitor survey	Insufficient data to measure indicator (some information that provides indirect evidence of spending patterns: Length of stay for example in Coningham et al 2013, Giri 2013)
1.2.1. Current number of tourism businesses in Lumbini	LDT/ADB (2012) SHAN hotel registration list Bhairahawa Tourism Board registration list Nepal Tourism Board, registration list Bhairahawa Commerce Registration Office	Incomplete data for hotels, shops and restaurants No data accessible from the Nepal Tourism Board No data available from Municipality level
1.2.2. Annual growth rate of tourism businesses between 1978 and 2018	Bhairahawa Tourism Board registration list National Tourism Board registration list	Only sources with opening dates of businesses but incomplete No data accessible from National Tourism Board No data on shops and restaurants
1.2.3. Share of non-local business owners	Bhairahawa Tourism Board registration list National Tourism Board registration list	Only sources with opening dates of businesses but incomplete No data accessible from National Tourism Board No data on shops and restaurants
1.3.1.-2.Tourism business income and expenditures	Annual Economic Survey reports, Ministry of Finance Nepal Rastra Bank Economic Reports	No data accessible for Lumbini for period of study
1.3.3. Multiplier	n/a	Based on 1.3.1. evaluation
1.4.1. Total investments in the LMP	LDT LDT Darshan UNESCO/UNDP's Review of LMP implementation	Good data available and accessible on investment

1.4.2. Local Tax revenues	Ministry of Finance (Inland Revenue Office) Customs Office Bhairahawa Municipality	No data accessible for Lumbini or Rupandehi for period of study from Ministry of Finance / Inland Revenue Office No data accessible from Municipality level
1.4.3. Entrance fees and other site revenues	LDT Lumbini Darpan	Entrance fee: data available and accessible based on visitor numbers Other revenues (mainly land and service charges for monasteries): available but not accessible for this research
1.5.1.Loss of agricultural land	Lumbini Master Plan	Data available

Appendix 8.3 : Data gap analysis for social indicators and sub-indicators		
Social Indicators and Sub-indicators	Source consulted	Evaluation
2.1.1. Construction of the LMP's school	UNESCO/UNDP's Review of LMP implementation LDT	No recorded progress in the implementation
2.1.2. Number of education programmes run by site managers	LDT Darpan Interviews with staff	Coverage incomplete for certain years, but none recorded in data available/accessible
2.1.3. Indirectly: number of schools opened by or with the support of Buddhist monasteries and community	Lumbini Social Service Foundation	Good availability and accessibility at local level
2.2.1. Road development in Lumbini Municipality	UNESCO/UNDP review ADB/WB project reports Municipality maps	Good availability and accessibility at local level
2.2.2. Number of health post built in the LMP	UNESCO/UNDP's Review of LMP implementation LDT	No recorded progress in the implementation
2.2.3. Number of other public facilities built in the LMP	UNESCO/UNDP's Review of LMP implementation LDT	Coverage incomplete for certain years, but none recorded in data available/accessible
2.2.4. Public use of water reservoirs in LMP	LDT UNESCO/UNDP's Review of LMP implementation	No recorded progress in the implementation
2.2.5. Waste management system	LDT UNESCO publications	No recorded progress in the implementation
2.2.6. Indirectly: number of IBS and monasteries-run health and water access projects	International Buddhist Society Monasteries	Good data available for IBS project Incomplete data for the whole implementation period for programmes led by monasteries
2.3.1. List of monthly or annual cultural and festival events in the LMP	LDT Monasteries Lists record national and local celebrations and	Partially incomplete (no data for individual monasteries) No participation data

	annual Buddhist festivals in Lumbini	
2.3.2. Continuity of local rituals and worship in SG (based on comparison of inventory of known practices in past and practices today)	Visitors' and researchers' accounts Photographic records (Allchin, LDT, etc) visitor survey and observation Scoping interviews	Incomplete data no data on local participation – numbers, origins, level of participation
2.3.3. Spatial distribution between nearest seven villages and SG	LMP map Molesworth and Muller (2005) Current map and villages (google earth images)	Good available and accessible data from LMP preparation and current data

Appendix 8.4 : Data gap analysis for socio-economic indicators and sub-indicators		
Socio-economic indicators and sub-indicators	Sources consulted	Evaluation
3.1.1. Number of people employed in the tourism sector	SHAN National Tourism Board Bhairahawa Tourism Board Economic surveys, Nepal Rastra Bank Tourism employment surveys Central Bureau of Statistics Municipality Consultant reports and previous research	No data accessible on Lumbini Municipality / former VDCs Consultant reports, reliability poor (see Chapter 3, Section 3.3)
3.1.2. Number of local residents employed in the LDT and the monasteries	LDT Monasteries interviews Previous research / publications	Breakdown of current employment at LDT provided (long-term data not accessible) No administrative data accessible for the monastic zone employment records Estimate of current number of employees in Monastic zone based on interviews
3.2.1. Distribution of business owners by gender	Same as 3.1.1. Household surveys	Data incomplete, only accessible for few tourism businesses in Lumbini
3.2.2. Distribution of employees by gender	Same as 3.2.1.	No data accessible for tourism businesses; Gender breakdown partially accessible for current employment in LDT
3.3.1. Distribution of business owners by caste/ethnic groups	Same as 3.2.1.	No data accessible for tourism businesses or current LDT employment
3.3.2. Distribution of employees by caste/ethnic groups	Same as 3.2.1.	No data accessible for tourism businesses
3.4.1. Number of households displaced	Lumbini Master Plan	Data available and accessible

3.4.2. Compensation and mitigation	Lumbini Master Plan LDT Previous research/publication	Data incomplete with figures related to the number of households affected and compensation given for agricultural land No reliable data for private housing compensations Limited available data on relocated households post land acquisition phase
3.1.1. Number of people employed in the tourism sector	SHAN National Tourism Board Bhairahawa Tourism Board Economic surveys, Nepal Rastra Bank Tourism employment surveys Central Bureau of Statistics Municipality Consultant reports and previous research	No data accessible on Lumbini Municipality / former VDCs Consultant reports, reliability poor (see Chapter 3, Section 3.3)
3.1.2. Number of local residents employed in the LDT and the monasteries	LDT Monasteries interviews Previous research / publications	Breakdown of current employment at LDT provided (long-term data not accessible) No administrative data accessible for the monastic zone employment records Estimate of current number of employees in Monastic zone based on interviews
3.2.1. Distribution of business owners by gender	Same as 3.1.1. Household surveys	Data incomplete, only accessible for few tourism businesses in Lumbini
3.2.2. Distribution of employees by gender	Same as 3.2.1.	No data accessible for tourism businesses; Gender breakdown partially accessible for current employment in LDT
3.3.1. Distribution of business owners by caste/ethnic groups	Same as 3.2.1.	No data accessible for tourism businesses or current LDT employment

3.3.2. Distribution of employees by caste/ethnic groups	Same as 3.2.1.	No data accessible for tourism businesses
3.4.1. Number of households displaced	Lumbini Master Plan	Data available and accessible
3.4.2. Compensation and mitigation	Lumbini Master Plan LDT Previous research/publication	Data incomplete with figures related to the number of households affected and compensation given for agricultural land No reliable data for private housing compensations Limited available data on relocated households post land acquisition phase

APPENDIX 9: Evidence for long-term economic, social and socio-economic impacts summary

Appendix 9.1 : Economic impact evaluation based on existing data

Economic Indicators and	Sub-indicators	Evidenced impact
1.1. Visitor Spending	1.1.1. Visitor Numbers	Incomplete data
		Increase in visitor numbers since 2002
	1.1.2. Visitor Spending per person per group (including total and by type of expenses)	No reliable data available
1.2. Business Creation	1.2.1. Current number of tourism businesses in Lumbini	Incomplete data, limited to hotels/guest houses
		Suggest increasing number of businesses in Lumbini
	1.2.2. Annual growth rate of tourism businesses between 1978 and 2018	Insufficient accessible data
	1.2.3. Share of non-local business owners	Insufficient data available / accessible
1.3. Income Generated by tourism sector	1.3.1.-2. Tourism business income and expenditures	No data accessible for Lumbini for period of study
	1.3.3. Multiplier	Insufficient data available / accessible
1.4. Local Government and site revenue	1.4.1. Total investments in the LMP	See table 4.5 for annual breakdown up to 2018
		Insufficient data on leakages:
		Based on LDT figures (table 4.5) from 1978 to 2009, administration costs represented an estimated 24% of total expenditures
		Contractors and goods/supplies mainly from outside Lumbini (high leakage)
	1.4.2. Local tax revenues	Insufficient data available / accessible
	1.4.3. Entrance fees and other site revenues	See table 4.5 for annual breakdown up to 2018
1.5. Negative economic effect	1.5.1. Loss of agricultural land	Loss of 136.3ha of cultivated land

Appendix 9.2 : Socio-economic impact evaluation based on existing data

Economic Indicators and	Sub-indicators	Evidenced impact
3.1. Total direct employment	3.1.1. Number of people employed in the tourism sector	No reliable data available
	3.1.2. Number of local residents employed in the LDT and the monasteries	No long-term data Current figures: 231 LDT employees Estimate in monasteries (based on individual interviews): 228 employees
3.2 Employment distribution by gender	3.2.1. Distribution of business owners by gender	Insufficient data available / accessible
	3.2.2. Distribution of employees by gender	Insufficient data available / accessible
3.3. Income poverty reduction	3.3.1. Distribution of business owners by caste/ethnic groups	No data accessible for tourism businesses or current LDT employment Previous research/studies suggest perceived inequalities between groups
	3.3.2. Distribution of employees by caste/ethnic groups	No data accessible for tourism businesses
3.4. Negative socio-economic effect (village displacement)	3.4.1. Number of households affected 3.4.2. Compensation and mitigation	1,050 people relocated 1,000NPR per bigha (0.7 hectare) of land Compensation unclear for houses and buildings No other provision

Appendix 9.3 : Social impact evaluation based on existing data

Indicators	Sub-Indicators	Evidenced impact
2.1. Education	2.1.1. Construction of the LMP's school	No progress recorded
	2.1.2. Number of educational programmes run by site managers	No other specific education division/ section and no specific allocated funds in the management structure
		Very few programmes recorded
		One annual scholarship programme 'Mayadevi Scholarship for girls' giving scholarships to local girls (from 2006)
	2.1.3. Indirectly: number of schools opened by or with the support of monasteries and other stakeholders	Four educational establishments
		Lumbini Buddhist University (founded in 2003)
2.2. Public Infrastructures and services	2.2.1. Road development in Lumbini Municipality	Taulihawa-Bhairahawa road completed
		Tarmac roads around the LMP and to the Indian border
		Improved connectivity at national level (with Kathmandu), regional level (Bhairahawa, Kapilbastu, Chitwan) and trans-border level (Gorakhpur)
	2.2.2. Number of health post built in the LMP	No progress recorded
	2.2.3. Number of other public facilities built in the LMP	Museum (with entrance fee)
		Survey on museum and local participation suggested that 44% of respondents had visited the museum recently (within the previous year); sample is small
		Public spaces used for picnics or leisure
	2.2.4. Public use of water reservoirs in LMP	Not implemented
	2.2.5. Waste management	Negative impact, as no waste management system despite an increasing number of resident population, visitors and tourism businesses
		TRPAP provided dustbins and/or incinerators in most Village Development Committees areas
	2.2.6. Indirectly: outputs of IBS and monasteries-run health and water access projects	1 Health clinic in Mahilwar (out of two health posts in Lumbini Municipality) founded by IBS)
		Total recipients: 600,000 people

		30 hand pumps by LSSF 321 hand pumps and 15 artisan wells by IBS Health camps between 2013-2016 by LSSF total participants: 200+750+850+850 = 2650 TRPAP provided 204 private and public toilets and 520m of drainage in Bhagwanpur, Ama and Lumbini Adarsha (2001-2006).
2.3. Religious and cultural participation	2.3.1. List of annual cultural and festival events in the LMP	13 festivals/events organised in the LMP area (by LDT, monasteries, etc.) recorded by LDT 28 festivals recorded by LDT when the LMP areas are used by local residents (as gathering and/or ritual spaces)
	2.3.2. Continuity of local rituals and worship in the Sacred Garden	Change: No daily practices anymore Continuity: festivals and specific rituals, i.e. Mundan, Prasad, Tharu rituals
	2.3.3. Spatial distribution and distance between relocated villages and nearest seven villages and the Sacred Garden	Main impact on the closest two villages: - Lumbini Bazaar 250m to 950m away - Kirtipur 800m (no specific relocation but current nearest village is Mahilwar at 1,700m and Paderiya 1,750m)

APPENDIX 10: Review of data gaps identified and possible actions to bridge the gap

Sub-indicators	Data gap status	Source	Role of site manager(s)	Data collection method
1.1.2. Visitor Spending per person per group	No reliable data available	Consultant / researchers' report	Research authorisation Commissioning investigations Possibility to collect data internally [?]	Visitor Surveys
1.2.1. Current number of tourism businesses in Lumbini	Available data for accommodation; partially accessible Very limited data for other tourism businesses	SHAN Tourism Board registration lists	Steps towards improving data sharing with Tourism board and other offices Commissioning investigations by consultant or researchers	Administrative data collection Business surveys
1.2.2. Annual growth rate of tourism businesses	Available data for accommodation; partially accessible No data for other tourism businesses	SHAN Tourism Board registration lists	Steps towards improving data sharing with Tourism board and other offices Commissioning investigations by consultant or researchers	Administrative data collection Business surveys
1.2.3. Share of non-local business owners	No reliable data accessible	Tourism boards registration lists	Steps towards improving data sharing with Tourism board and other offices Commissioning investigations by consultant or researchers	Administrative data collection Business surveys
1.3.1.-2.Tourism business income and expenditures	Availability at local level unknown	Most likely sources Tax revenue offices Municipality	Limited Steps towards improving data sharing with municipality Possibility to commission regular investigations by consultants or researchers	Administrative data collection Piloting the use of rapid assessment methods (i.e. business surveys)

Sub-indicators	Data gap status	Source	Role of site manager(s)	Data collection method
1.4.1. Total investments in the LMP	Good with few incomplete data (i.e. monasteries' construction) Unclear whether unavailable or inaccessible	LDT Monasteries	Step towards improving data sharing with all actors and stakeholders within the LMP area	Internal data
1.4.2. Estimated share of total investment not spent in Lumbini	Some incomplete data accessible (more limited for monasteries, etc.)	LDT Monasteries	Data is available but not accessible publicly	Internal data
1.4.3. Tax revenues for the local government	Availability unknown for earlier phases No accessibility	Municipality Inland Revenue Office	Improving data sharing and coordination with other stakeholders	Administrative data
1.4.4. Entrance fees and other site revenues	Data available, good accessibility for entrance fee data since 1994	LDT	Data available and accessible publicly	Internal data
2.3.1. List of monthly or annual cultural and festival events in the LMP	Good availability and accessibility with few incomplete information (i.e. monasteries, local festivals)	LDT	Possibility in the future to collect participation data for key events/festival internally	Update of LDT inventory Future possibilities for participant surveys
2.3.2. Continuity of local rituals and worship in SG	No data readily available Compilation of non-administrative sources possible	Multiple No single record of ritual practices performed	Compile list of local rituals and worship associated with Sacred Garden (similar to previous one)	Update present list Future possibilities for participant surveys or household surveys on cultural participation
3.1.1. Number of people employed in the tourism sector	Availability at local level unknown No accessibility	Municipality Ministry of Industry Tourism Board	Improving data sharing and coordination with other stakeholders	Administrative data Business surveys

Sub-indicators	Data gap status	Source	Role of site manager(s)	Data collection method
3.1.2. Number of local residents employed in the LDT and the monasteries	Availability unknown for period covered Access limited to current LDT employment figures	LDT Monasteries	Improving accessibility if data available for earlier phases Improving data sharing and coordination with stakeholders, including monasteries (the monastic by-laws regulations limit number of 'helpers')	Internal data
3.2.1. Distribution of business owners by gender	Availability at local level unknown No accessibility	Municipality Ministry of Industry Tourism Board	Improving data sharing and coordination with other stakeholders	Administrative data Business surveys
3.2.2. Distribution of employees by gender	Availability at local level unknown No accessibility	Municipality Ministry of Industry Tourism Board	Improving data sharing and coordination with other stakeholders	Administrative data Business surveys
3.3.1. Distribution of business owners by caste/ethnic groups	Availability at local level unknown No accessibility	Municipality Ministry of Industry Tourism Board	Improving data sharing and coordination with other stakeholders	Administrative data Business surveys
3.3.2. Distribution of employees by caste/ethnic groups	Availability at local level unknown No accessibility	Municipality Ministry of Industry Tourism Board	Improving data sharing and coordination with other stakeholders	Administrative data Business surveys

OTHER INDICATORS TO CONSIDER FOR MONITORING IMPACTS OF ON-GOING AND FUTURE DEVELOPMENTS				
Environmental impact Air pollution	Available from the Lumbini Observatory	ICIMOD	Collaboration and communication with the Lumbini Observatory	Observatory data
Overcrowding and traffic problems	Data availability unknown	LDT Municipality	Improving collaboration with Municipality to monitor impacts of visitors outside the LMP area	Household and visitor surveys
Security issues, based on number of incidents and crimes related to visitors and/or tourism (theft, etc)	Data availability unknown	LDT security data Local police Municipality	Ensuring data sharing and coordination with other stakeholders	Internal data on incidents Police records on crimes and minor incidents

APPENDIX 11: Primary data collection forms

COMMUNITY INTERVIEW

Date	Location	N°	Initials
1. About Interviewees Name, age, place of birth, occupation, how long has your family lived in Lumbini?			
2. **Present Use** *Do you ever go to the Sacred Garden? How often? For what purposes?* *Do you ever visit other parts of the Master Plan Area (i.e. museum, central canal, monastic zone..)?* *Do you benefit from any other facility/ infrastructure in the Lumbini Master Plan Area?* *Do you have any contact with the Buddhist monasteries? If so, to do what?* *Do you have any contact with the Lumbini Development Trust? For what purposes?*			
3. Land Ownership and Livelihood *Do you own land now? If so how much land?* *Where is it located? How do you use it?* *Do you earn enough from your land or do you need to do additional work?* *Main livelihoods in village* *Key purchasers, employers, industries, sectors, etc.* *Are you using local materials to earn money?* *Do you have any skill to produce handicraft? What kind of crafts/products?* *Are they sold anywhere else?* *Do you think visitors in Lumbini would be interested in buying these products?* *Could their production be increased?*			
4. Impacts of Lumbini development *What do you think you have gained from the development of Lumbini Master Plan? (i.e. infrastructure development, employment opportunities, facilities for worship, better environment, access to new services/goods, etc.)* *What do you think you have lost? (i.e. environment, livelihood, housing infrastructures, access to natural resources, etc.)* *Do you have any expectations from current developments around the site (Bhairahawa International airport, increase in number of Guest houses, hotels and LDT plans, etc.)? Concerns?*			
6. Other notes: *Other important local organisations/programs related to tourism or Lumbini Master Plan*			

Dear visitors,

This survey aims to provide information on the characteristics of tourism and pilgrimage in Lumbini and on the nature of visitor activities at the site. It is part of a wider study investigating the impact of the site development and tourism activities on local communities.

The project is coordinated by Durham University UNESCO Chair in Archaeological Ethics and Practice in Cultural Heritage, in collaboration with the Lumbini Development Trust and the Department of Archaeology (Government of Nepal). It is funded by the Arts and Humanities Research Council (United Kingdom) and HEFCE Newton Fund.

Responses to this questionnaire are completely anonymous and will be treated in strictest confidence. We greatly appreciate you taking the time to complete this questionnaire.

Ms Anouk Lafortune-Bernard, PhD student, Durham University (United Kingdom), Visitor survey coordinator

Professor Robin Coningham, UNESCO Chair in Archaeological Ethics and Practice in Cultural Heritage. University of Durham (United Kingdom)

Newton Fund

Arts & Humanities Research Council

United Nations Educational, Scientific and Cultural Organization

UNESCO Chair on Archaeological Ethics and Practice in Cultural Heritage, Durham University, United Kingdom

Northern Bridge
Doctoral Training Partnership

LUMBINI VISITOR SURVEY (2018)

Information to be filled in by surveyor:
Date _____ Location _____ N° _____ Initials _____

This survey aims to provide information on the characteristics of tourism and pilgrimage in Lumbini and on the nature of visitor activities at the site. It is part of a wider study investigating the social and economic impact of the site development and tourism activities on local communities which will form part of a PhD research. Responses to this questionnaire are completely anonymous and will be treated in strictest confidence. We greatly appreciate you taking the time to complete this questionnaire.

GENERAL INFORMATION ABOUT RESPONDENT

1) How many people are in your group? _____

2) Who are you travelling with (*several answers possible*)?

☐ *Family* ☐ *Friend* ☐ *Colleague* ☐ *Organised Tour Group*
☐ *Couple* ☐ *School* ☐ *Other (specify):* _____

3) Gender of respondent (*circle*): *Female / Male / Other:* _____

4) Age of respondent: *18-25 / 26-35 / 36-45 / 46-65 / more than 65*

5) What is your nationality? _____

For Nepali and Indian visitors ONLY, please specify your village/city and district of residence? _____

6) What is your religion? *Buddhist / Hindu / Christian / Muslim / Other:* _____

ABOUT YOUR VISIT

7) What is the purpose of your visit in Lumbini (*several answers possible*)?

☐ *Heritage* ☐ *Nature* ☐ *Leisure* ☐ *Friend / Family visit* ☐ *Religion / Pilgrimage*
☐ *Education* ☐ *Culture* ☐ *Business* ☐ *Other (specify):* _____

8) Is your visit organised independently or as part of a package tour?
Independent / Package tour
If it is a package tour, please specify the name of the tour operator: _____

Where is it based (*city, country*)? _____

9) What is your mode of transportation to / from the site (several answers possible)?

☐ *Personal car* ☐ *Local taxi* ☐ *Rental car* ☐ *Private bus/coach* ☐ *Public Bus*
☐ *Motorbike* ☐ *Bicycle* ☐ *Rickshaw* ☐ *Other (specify):* _____

10) How long are you staying in Lumbini?
☐ *Less than 2hrs* ☐ *Half a day* ☐ *One day (no night)* ☐ *Overnight*

If you are staying one day or less, where are you staying overnight? _____

If you are staying overnight, can you, please, specify:

- How many nights? _____
- In what type of accommodation?

☐ *Hotel / Guest house* ☐ *Family / Friend's house* ☐ *Monastery* ☐ *Other:* _____

11) Is this your first visit to the site? *Yes / No* **If not**, number of previous visits: ___

12) What other sites/areas are you visiting?

☐ *Tilaurakot* ☐ *Kudan* ☐ *Gotihawa* ☐ *Araurakot*
☐ *Niglihawa* ☐ *Ramagrama* ☐ *Devdaha* ☐ *Sagrahawa*
☐ *Sisaniya* ☐ *Chitwan National Park* ☐ *India* ☐ *Kathmandu*
☐ *No other site*

VISITOR EXPENDITURE IN LUMBINI

13) Could you estimate how much you have spent **during your stay in Lumbini**?

Accommodation: _____ Travel: _____ Food/Drink: _____ Tour Guide: _____

Entrance Fee: _____ Shopping (souvenirs, presents, etc): _____

Other (please specify): _____

14) How much would be your **total expenses during your stay in Lumbini** (*specify currency*)? _____

United Nations Educational, Scientific and Cultural Organization · UNESCO Chair on Archaeological Ethics and Practice in Cultural Heritage, Durham University, United Kingdom · Northern Bridge Doctoral Training Partnership

LUMBINI BUSINESS SURVEY (2018)

As part of a PHD research, I am collecting data on the nature of the local tourism industry and its social and economic impact. Your responses will be used for this purpose. They are anonymous and will be treated in strictest confidence.

Date: _____ Time: _____ Surveyor: _____

I) GENERAL INFORMATION

1) Full name of establishment: _____
2) Address: _____
3) Name of owner: _____
4) Type of Business (*hotel, restaurant, shop, etc.*): _____
5) Opening year: _____
6) Have you ever participated in a tourism training program? *Yes / No*

If yes, please specify the nature of the program and organisation(s) providing the training? _____

7) Have you ever participated in a microfinance program or received financial support from an institution or cooperative for your business? *Yes / No*

If yes, please specify the nature of the support and the organisation(s) coordinating the program? _____

FOR HOTELS AND GUEST HOUSES **ONLY**: Characteristics of the establishment:

a. Number of rooms: _____ b. Total number of beds: _____
c. Minimum price of rooms: _____ d. Maximum price of rooms: ___
e. Annual occupancy rate: _____

II) BUSINESS SPENDING AND REVENUES

8) What are the main expenditures of the business?

Expenditure	Cost per month (NPR)	Expenditure	Cost per month (NPR)
Employee salary		Rent	
Purchasing goods/supplies		Loan repayment	
Construction work		Taxes	
Maintenance		Other (please specify):	
Energy			

9) On average, how much income does the business generate (in NPR)?

Daily (low season): _____ Daily (high season): _____

Monthly (low season): _____ Monthly (high season): _____

Yearly: _____

10) Over the last fiscal year, did the business generate profit? *Yes / No*

11) Any additional comments on section II: _____

III) MANAGEMENT OF THE BUSINESS

12) Is the owner of the business: *Male / Female / Other (please specify):*

13) Birthplace/Headquarter of the owner (VDC, district): _____

14) Are there any employees? *Yes / No* **(if not, go straight to the question 17)**

If yes, please provide a breakdown of your employees by gender and ethnic/caste groups:

Category	*Number*	*Other Ethnic/caste groups (specify)*	*Number*
Total employees			
Male			
Female			
Tharu			
Other Tarai indigenous groups			
Muslim (Musalman)			

Any comments on section III): _____

ABOUT THE INTERVIEWEE

15) Person interviewed (*circle*): *Owner / Manager / Other (specify):* _____

16) Characteristics of the interviewee:

a) Gender (*circle*): *Male / Female* b) Age: _____ c) Nationality: _____

d) Ethnicity: _____ e) Religion: _____

17) Is this business the main source of income for your household? *Yes / No*

If not, what is your main source of income? _____

APPENDIX 12: List of scoping interviews conducted

- January-March 2017

Date	Activity	Interviewee Organisation / Group
24/01/17 – 25/01/17	Initial visit to Lumbini Municipality and initial interviews in municipality office Initial test of community interview form	Municipality officers, journalists for the local radio, Paderiya and Lankapur residents
17/02/17 – 18/02/17	Second visit to Municipality Community interviews in Tenuhawa	Municipality office Residents' interviews
19/02/17	Attending the ISC meeting for UNESCO-JFIT *Strengthening the Conservation and Management of Lumbini Birthplace of Lord Buddha World Heritage Site*, Phase II	n/a
20/02/17	Key informant interview	SHAN Local tourism business owner Local resident
21/02/17	Key informant interview	Founder of the International Buddhist Society, Lumbini, Nepal and Spiritual Advisors, Lumbini Development Trust,
21/02/17	Visit to LDT offices to make a request for information and access to their documentation	LDT
22/02/17	Initial Interviews in LMP area with monasteries	Monastic community
23/02/17	Visit to offices in Bhairahawa, including Rupandehi district Tourism Board, Tourism office, Greater Lumbini Area Development Committee, Department of Cottage and Small Industries, Industry department, Chamber of Commerce and Industry	District Administrative offices and tourism business stakeholders
24/02/17 – 25/02/17	Interviews in LMP area with monasteries	Monastic community
26/02/17	Meeting with tour guides to organise the LMP visitor survey team, Key informant interview	_ Hotel manager
27/02/17	Meeting with Museum Chief Visit of LDT Tourist office	LDT
28/02/17	Briefing of museum staff to brief the visitor survey team	_
01/03/17 – 5/03/17	Visitor Surveys in LMP area	Visitor groups
01/03/17 – 1/07/2017	Visitor Surveys at the Lumbini Museum	Museum visitors
02/03/17	Interview at Panditarama Meditation Centre	Panditarama Lumbini International Vipassana Meditation Centre

03/03/17 – 07/03/17	Community interviews in Laxmipur, Mahilwar, Majhidiya, Pipara, Sombarshi, Ekala, Karmahawa, Khungai and Bhagwanpur Visit of Community Learning Centre in Paderiya	Residents' interviews and local stakeholders, including ward secretaries, members of Tharu Museum (Sombarshi), handicraft centres (Mahilwar and Khungai)
08/03/17	Initial interviews with shops and small businesses in Cultural Zone	Shop owners and employees
09/03/17	Key informant interview	SHAN Hotel owner
10/03/17	Key informant interview	International Buddhist Society Health Clinic

- January-February 2018

Date	Activity	Organisation/Group
23/01/18 – 25/01/18	Business Surveys in Lumbini Municipality	_
26/01/18 – 30/01/18	International survey visitors Additional business survey interviews	_
14/02/18	Visit and interviews in Lumbini Municipality Final business survey interviews	Municipality office (closed due to strike)

- January 2019

Date	Activity	Organisation/Group
	Visit of the new Information Centre and collection of Lumbini Darpan	LDT
11/01/19	Focus group and interviews with local transportation committees (taxi and rickshaw drivers)	Lumbini Taxi committee Rickshaw committee (double check name)
11/01/19	Visit to the municipality to collect Population profile data	Municipality office
11/01/19	Second visit to Sombarshi Tharu Museum that had reopened	

APPENDIX 13: Registration lists for tourism businesses in Lumbini

2012 list	SHAN LIST (2017)	Rupandehi District Registration List (since 2008)	2018 SURVEY LIST
NOT LISTED	Akash International	No record	Hotel Aakash International
Ashoka Guest House	Ashoka Guest house	No record	Ashoka Guest House
Buddha bhumi G.House	Buddha bhumi G.House	Registered	Buddha Bhoomi Guest House
Lumbini Buddha Maya Garden	Buddha Maya Resort	No record	Lumbini Buddha Maya Garden
Buddha Palace	Buddha Palace	Registered	Buddha Palace
NOT LISTED	Buddhamaya Hotel Palace	No record	Buddha Maya Garden
NOT LISTED	DownTown G.House	No record	Hotel Buddha Town
NOT LISTED	Everest G.House	No record	Mount Everest Lodge
Gautam Buddha Lodge	Gautam Buddha Lodge	No record	NOT INTERVIEWED*
NOT LISTED	Hamro Guest House	No record	NOT INTERVIEWED*
Hotel Annanda INN	Hotel Annanda INN	Registered	Hotel Ananda Inn Pvt
NOT LISTED	Hotel Basil	Registered	TEMPORARILY CLOSED
NOT LISTED	Hotel Buddha Residency	No record	NOT INTERVIEWED (PRESUMED CLOSED)**
NOT LISTED	Hotel Gautam Buddha	Registered	Hotel Gautam Buddha
NOT LISTED	Hotel Green View	No record	Green Lumbini View Hotel
Hotel Hokke	Hotel Hokke	No record	Hokke Hotel
Hotel Kasai	Hotel Kasai	No record	Kasai Hotel
NOT LISTED	Hotel Little Buddha	Registered	Hotel Little Buddha
	Hotel Lumbini center lodge	No record	PERMANENTLY CLOSED
NOT LISTED	Hotel New center point	No record	Hotel New Centre Point
Hotel New Cristal Garden	Hotel New Cristal Garden	Registered	Hotel Lumbini Garden New Crystal
Hotel Peace Land	Hotel Peace Land	Registered	Hotel Peace Palace Nepal
NOT LISTED	Hotel peace Zone	No record	Hotel Peace Zone
Hotel President	Hotel President	No record	Hotel President & Thakali Bhanccha Ghar
NOT LISTED	Hotel Sharashree	No record	Hotel Sara Shree
NOT LISTED	Hotel Stupa	No record	Hotel Stupa
NOT LISTED	Hotel wandanna	No record	Hotel Global***
Hotel Zambala	Hotel Zambala	Registered	Lumbini Zambala Hotel
Lotus Guest House	Lotus Guest House	No record	Lotus Lodge & Restaurant

Lumbini Bamboo Resort	Lumbini Bamboo Resort	Registered	Lumbini Bamboo Resort
Lumbini Buddha Garden	Lumbini Buddha Garden	No record	NOT INTERVIEWED*
Lumbini G.House	Lumbini G.House	No record	Lumbini Guest House
Lumbini Garden Lodge	Lumbini Garden Lodge	No record	Lumbini Garden Lodge
Lumbini Peace Hotel	Lumbini Peace G.House	No record	Lumbini Peace Hotel Lodge & Restaurant
NOT LISTED	Lumbini Village Resort	No record	NOT INTERVIEWED*
NOT LISTED	Mahima G. House	No record	Hotel Mahima
Manakamana G. House	Manakamana G. House	No record	NOT INTERVIEWED*
Hotel Manasi	Manasi Guest House	No record	Mansi Lodge & Restaurant
Maya Devi G. House	Maya Devi G. House	No record	Maya Devi Guest House
NOT LISTED	Mirage INN	Registered	Mirage Inn Pvt
NOT LISTED	Osho jetwana village	No record	NOT INTERVIEWED****
Paradise G.House	Paradise G.House	Registered	Lumbini Paradise Guest House
NOT LISTED	Prakash G.House	No record	NOT INTERVIEWED*
Rahul G.House	Rahul G.House	No record	Rahul Guest House
Royal Guest House	Royal Guest House	No record	Royal Guest House
NOT LISTED	Rubi G.House	No record	NOT INTERVIEWED*
NOT LISTED	Seven Step G. House	Registered	Seven Steps Guest House
NOT LISTED	Shakya G. House	Registered	NOT INTERVIEWED
Shanti G.House	Shanti G.House	No record	PERMANENTLY CLOSED
NOT LISTED	Shreelanka G.House	No record	Sri Lankan Resthouse
Siddhartha G. House	Siddhartha G. House	Registered	Siddhartha Guest House
NOT LISTED	Sudeep Lodge	No record	NOT INTERVIEWED*
Sunflower G.House	Sunflower G.House	No record	Sunflower Traveller's Lodge & Restaurant
NOT LISTED	Tanahu Guest House	No record	NOT INTERVIEWED*
The Lumbini Village Lodge	The Lumbini Village Lodge	Registered	Lumbini Village Lodge
NOT LISTED	Veri G.House	No record	NOT INTERVIEWED
NOT LISTED	NOT REGISTERED	No record	Ashoka Lodge and Restaurant
NOT LISTED	NOT REGISTERED	No record	Cozy Lodge & Restaurant
NOT LISTED	NOT REGISTERED	No record	Hotel Lumbini Darshan
NOT LISTED	NOT REGISTERED	No record	Hotel Sunrise
NOT LISTED	NOT REGISTERED	Registered	Hotel the Holy Birth
NOT LISTED	NOT REGISTERED	No record	Kavre Guest House
NOT LISTED	NOT REGISTERED	No record	Lumbini Village Garden

NOT LISTED	NOT REGISTERED	No record	Momina Hotel & Lodge
NOT LISTED	NOT REGISTERED	No record	Suramma Restaurant/Hotel
NOT LISTED	NOT REGISTERED	No record	Lumbini Buddha Guest House
* not seen at the time of the survey ** A restaurant of the same name was surveyed, but there was no room on offer *** The hotel has changed name since registration ****Osho Jetban is a retreat and meditation centre, not a hotel			

APPENDIX 14: Regression equations

14.1) Visitor Surveys Regression Models

Ordinal Logistic regression

- **General equation**

$$\Pr(Y_j = i) = \Pr(k_i - 1 < \beta_1 x_{1j} + \beta_2 x_{2j} + (\ldots) + \beta_n x_{nj} + u_j \leq k_i)$$

Where
Y is the dependent variable
j is the outcome
i is the value of the outcome on the scale from 1 to 4.
k is the number of possible outcomes
βnXnj are the estimated regression coefficients when for binary predictors the outcome x = 1. NB: for categorical predictors, it will be run individually for x = 2; x = 3, etc.
uj is the vector of error terms. They are latent regression errors independent of Xn. It is assumed to be logistically distributed in ologit

The equation has to be run for each outcome of the dependent variable.

- **Model A: Determinants of Total Visitor Spending**

ologit V17_Total_SpCateg i.V1_Group i.V3_Nat i.V6_Religion V7_Purp V8_Package i.V10_Lengthofstay V12_LumbiniOnly

$$\Pr(V17_j = i) = \Pr(k_i - 1 < \beta_1 V1(2)_{1j} + \beta_2 V1(3)_{2j} + \beta_3 V3(2)_{3j} + \beta_4 V3(3)_{4j} + \beta_5 V6(2)_{5j} + \beta_6 V6(3)_{6j} + \beta_7 V6(4)_{7j} + \beta_8 V7_{8j} + \beta_9 V8_{9j} + \beta_{10} V10(2)_{10j} + \beta_{11} V10(3)_{11j} + \beta_{12} V10(4)_{12j} + \beta_{13} V12_{13j} + u_j \leq k_i)$$

Where
j is each possible outcome
i is the value of the outcome on the scale from 0 to 4.
k is the number of possible outcomes (k= 5)
βnXnj are the estimated regression coefficients when for binary predictors the outcome x = 1. NB: for categorical predictors, it will be run individually for x = 2; x = 3, etc.
uj is the vector of error terms. They are latent regression errors independent of Xn (V1(2), V1(3), V3(2), etc.)

- **Model B: Determinant of length of stay in Lumbini**

ologit V10_Lengthofstay i.V1_Group i.V3_Nat i.V6_Religion V7_Purp V8_Package V12_LumbiniOnly

$$\Pr(V10_j = i) = \Pr(k_i - 1 < \beta_1 V1(2)_{1j} + \beta_2 V1(3)_{2j} + \beta_3 V3(2)_{3j} + \beta_4 V3(3)_{4j} + \beta_5 V6(2)_{5j} + \beta_6 V6(3)_{6j} + \beta_7 V6(4)_{7j} + \beta_8 V7_{8j} + \beta_9 V8_{9j} + \beta_{13} V12_{13j} + u_j \leq k_i)$$

Where
j is each possible outcome
i is the value of the outcome on the scale from 1 to 4.
k is the number of possible outcomes (k= 4)
βnXnj are the estimated regression coefficients when for binary predictors the outcome x = 1.
NB: for categorical predictors, it will be run individually for x = 2; x = 3, etc.
uj is the vector of error terms. They are latent regression errors independent of Xn (V1(2), V1(3), V3(2), etc.)

- **Model C: Determinant of accommodation spending**

ologit V13_Accom_SpCateg i.V1_Group i.V3_Nat V7_Purp V8_Package V12_LumbiniOnly

$$\Pr(V13_j = i) = \Pr(k_i - 1 < \beta_1 V1(2)_{1j} + \beta_2 V1(3)_{2j} + \beta_3 V3(2)_{3j} + \beta_4 V3(3)_{4j} + \beta_5 V7_{5j} + \beta_6 V8_{6j} + \beta_7 V12_{7j} + u_j \leq k_i)$$

Where
j is each possible outcome
i is the value of the outcome on the scale from 0 to 4.
k is the number of possible outcomes (k= 5)
βnXnj are the estimated regression coefficients when for binary predictors the outcome x = 1.
NB: for categorical predictors, it will be run individually for x = 2; x = 3, etc.
uj is the vector of error terms. They are latent regression errors independent of Xn (V1(2), V1(3), V3(2), etc.)

- **Model D: Determinant of transportation spending**

ologit V14_Transp_SpCateg i.V1_Group i.V11_accom_type i.V3_Nat V7_Purp V8_Package V12_LumbiniOnly

$$\Pr(V14_j = i) = \Pr(k_i - 1 < \beta_1 V1(2)_{1j} + \beta_2 V1(3)_{2j} + \beta_3 V11(1)_{3j} + \beta_4 V11(2)_{4j} + \beta_5 V3(2)_{5j} + \beta_6 V3(3)_{6j} + \beta_7 V7_{7j} + \beta_8 V8_{8j} + \beta_9 V12_{9j} + u_j \leq k_i)$$

- **Model E: Determinant of food/drink spending**

ologit V15_FD_SpCateg i.V1_Group i.V11_accom_type i.V3_Nat V7_Purp V8_Package V12_LumbiniOnly

$$\Pr(V15_j = i) = \Pr(k_i - 1 < \beta_1 V1(2)_{1j} + \beta_2 V1(3)_{2j} + \beta_3 V11(1)_{3j} + \beta_4 V11(2)_{4j} + \beta_5 V3(2)_{5j} + \beta_6 V3(3)_{6j} + \beta_7 V7_{7j} + \beta_8 V8_{8j} + \beta_9 V12_{9j} + u_j \leq k_i)$$

- **Model F: Determinant of souvenir/gift/shopping spending**

ologit V16_Shop_SpCateg i.V1_Group i.V11_accom_type i.V3_Nat V7_Purp V8_Package V12_LumbiniOnly

$$\Pr(V16_j = i) = \Pr(k_i - 1 < \beta_1 V1(2)_{1j} + \beta_2 V1(3)_{2j} + \beta_3 V11(1)_{3j} + \beta_4 V11(2)_{4j} + \beta_5 V3(2)_{5j} + \beta_6 V3(3)_{6j} + \beta_7 V7_{7j} + \beta_8 V8_{8j} + \beta_9 V12_{9j} + u_j \leq k_i)$$

14.2) Business Surveys Regression Models

Logistic regression

- **General equation**

$$logit\{\Pr(Y = 1|\, x)\} = \log\left\{\frac{\Pr(Y = 1|\, x)}{1 - \Pr(Y = 1|x)}\right\}$$

Where

Pr(Y = 1|x) is the probability of Y (the dependent variable) to have the outcome coded 1

For short, in the next equations Pr(Y = 1|x) = p

$$\log\frac{p}{1-p} = \alpha + \beta_1 x_1 + \beta_2 x_2 + (\ldots) + \beta_n x_n$$

Where
α is the coefficient estimate for the constant in the null model in log odds (on stata is represented as _cons)
βnXn is the regression coefficient when for binary predictors the outcome X = 1. NB: for categorical predictors, it will be run individually for x = 2; x = 3, etc.
n are the predictors

- **Logistic regression Model 1: Determinants of Type of Business Ownership**

logit V1_Typeofbusiness V2_OwnerHill i.V3_OwnerCaste_Categ

$$logit\{\Pr(V1 = 1|x)\} = \alpha + \beta_{V2} x_{V2} + \beta_{V3(2)} x_{V3(2)} + \beta_{V3(3)} x_{V3(3)}$$

- **Logistic Regression Model 2: Determinants of Women Employment**

. logit V7_EmployeeGender V1_Typeofbusiness V2_OwnerHill i.V3_OwnerCaste_Categ

$$logit\{\Pr(V7 = 1\,|\, x)\} = \alpha + \beta_{V1} x_{V1} + \beta_{V2} x_{V2} + \beta_{V3(2)} x_{V3(2)} + \beta_{V3(3)} x_{V3(3)}$$

- **Logistic Regression Model 3: Determinants of Tharu Employment**

logit V9_EmployeeTharu V1_Typeofbusiness V2_OwnerHill i.V3_OwnerCaste_Categ

$$logit\{\Pr(V9 = 1\,|\, x)\} = \alpha + \beta_{V1} x_{V1} + \beta_{V2} x_{V2} + \beta_{V3(2)} x_{V3(2)} + \beta_{V3(3)} x_{V3(3)}$$

Ordinal Logistic regression

- **General equation**

$$\Pr(Y_j = i) = \Pr(k_i - 1 < \beta_1 x_{1j} + \beta_2 x_{2j} + (\dots) + \beta_n x_{nj} + u_j \leq k_i)$$

Where
Y is the dependent variable j is the outcome i is the value of the outcome on the scale from 1 to 4. k is the number of possible outcomes βnXnj are the estimated regression coefficients when for binary predictors the outcome x = 1. NB: for categorical predictors, it will be run individually for x = 2; x = 3, etc. uj is the vector of error terms. They are latent regression errors independent of Xn. It is assumed to be logistically distributed in ologit

The equation has to be run for each outcome of the dependent variable.

- **Ordinal Logistic Regression Model 4a: Determinants of Tarai Group Employment**

ologit V8_TaraiWorkforce V1_Typeofbusiness i.V3_OwnerCaste_Categ

$$\Pr(V8_j = i) = \Pr(k_i - 1 < \beta_1 V1_{1j} + \beta_2 V3(2)_{2j} + \beta_3 V3(3)_{3j} + u_j \leq k_i)$$

Where
j is each possible outcome i is the value of the outcome on the scale from 1 to 4. k is the number of possible outcomes (k= 4) βnXnj are the estimated regression coefficients when for binary predictors the outcome x = 1. NB: for categorical predictors, it will be run individually for x = 2; x = 3, etc. uj is the vector of error terms. They are latent regression errors independent of (V1, V3(2), V3(3))

- **Ordinal Logistic Regression Model 4b: Determinants of Tarai Group Employment**

ologit V8_TaraiWorkforce V1_Typeofbusiness V2_OwnerHill

$$\Pr(V8_j = i) = \Pr(k_i - 1 < \beta_1 V1_{1j} + \beta_2 V2_{2j} + u_j \leq k_i)$$

Negative Binomial Regression

- **General Equation**

$$\Pr(Y = y_i \mid \mu_i, \alpha) = \left(\frac{\Gamma(y_i + \alpha^{-1})}{(\Gamma(y_i + 1)\Gamma(\alpha^{-1})}\right)\left(\frac{\alpha^{-1}}{\alpha^{-1} + \mu_i}\right)^{\alpha^{-1}} \left(\frac{\mu_i}{a^{-1} + \mu_i}\right)^{y_i}$$

Where
Y is the dependent variable
Yi are the possible values of Y, the non-negative integers: 0, 1, 2, 3, etc.
α is the estimated dispersion parameter (constant) (on stata is represented as alpha)
μi is a parameter of the mean incidence rate of y per unit of exposure t. When no exposure is given it is assumed to be 1.

μi is calculated as follows:

$$\mu_i = exp(ln(t_i) + \beta_1 x_{1i} + \beta_2 x_{2i} + (\ldots) + \beta_n x_{ni})$$

Where
βnXnj are the estimated regression coefficients when for binary predictors the outcome x = 1.
NB: for categorical predictors, it will be run individually for x = 2; x = 3, etc.
Ti is the period of exposure. In this case, there is no exposure therefore ti = 1. Ln(1) = 0.

- **Negative Binomial Regression Model 5: Determinants of Hill Group Employment**

nbreg V13_TotalHill V1_Typeofbusiness V2_OwnerHill i.V3_OwnerCaste_Categ

$$\Pr(V13 = V13_i \mid \mu_i, \alpha) = \left(\frac{\Gamma(y_i + \alpha^{-1})}{(\Gamma(y_i + 1)\Gamma(\alpha^{-1})}\right)\left(\frac{\alpha^{-1}}{\alpha^{-1} + \mu_i}\right)^{\alpha^{-1}} \left(\frac{\mu_i}{a^{-1} + \mu_i}\right)^{V13_i}$$

With: $\mu_i = exp(\beta_1 V1_{1i} + \beta_2 V2_{2i} + \beta_3 V3(2)_{3i} + \beta_3 V3(3)_{3i})$

- **Negative Binomial Regression Model 6: Determinants of Upper Castes Group Employment**

nbreg V14_TotalUpperCaste V1_Typeofbusiness V2_OwnerHill i.V3_OwnerCaste_Categ

$$\Pr(V14 = V14_i \mid \mu_i, \alpha) = \left(\frac{\Gamma(y_i + \alpha^{-1})}{(\Gamma(y_i + 1)\Gamma(\alpha^{-1})}\right)\left(\frac{\alpha^{-1}}{\alpha^{-1} + \mu_i}\right)^{\alpha^{-1}} \left(\frac{\mu_i}{a^{-1} + \mu_i}\right)^{V14_i}$$

With: $\mu_i = exp(\beta_1 V1_{1i} + \beta_2 V2_{2i} + \beta_3 V3(2)_{3i} + \beta_3 V3(3)_{3i})$

APPENDIX 15: Lumbini visitor survey results

Appendix 15.1 : Visitor Survey: Descriptive Statistics Summary Tables

Q1/Q5	Nepal (GLA)	India (BR and UP)	Nepal (excl GLA)	India (excl BR and UP)	Other South Asia	Southeast Asia	East Asia	Other Foreigners	Nationality Unspecified	TOTAL
Total people	1894	1458	4680	1301	1243	2267	911	618	33	14405
Total groups	333	189	467	111	41	94	98	214	4	1551

Q2	Single/Couple	Family/Friends	Organised Tour Group	Mix/Other	UNSP	TOTAL
Total respondents	277	1011	157	104	2	1551

Q3	Male	Female	Other	Mix	Unsp	TOTAL
Total respondents	622	205	0	723	1	1551

Q4	18-25	26-35	36-45	46-65	over 65	Mixed responses	Unsp	TOTAL
Total respondents	315	333	165	143	35	493	67	1551

Q6/5	Nepal (excl GLA)	India (excl BR and UP)	Other South Asia	Southeast Asia	East Asia	Other foreigners	Nepal (GLA only)	India (BR and UP only)	UNK	TOTAL
Hindu	338	63	1	0	0	0	280	138	1	821
Buddhist	63	26	38	91	71	53	5	11	1	359
Hindu/Buddhist	33	7	0	0	2	0	12	6	0	60
Christian	5	1	1	1	3	53	4	2	1	71
Muslim	4	2	1	2	0	0	8	13	0	30
Hindu/Muslim	4	1	0	0	0	0	2	10	0	17
Mix	8	5	0	0	3	6	15	1	0	38
Other	3	4	0	0	17	92	2	0	0	118
No response	9	2	0	0	2	10	5	8	1	37
TOTAL RESPONSES	467	111	41	94	98	214	333	189	4	1551

Q7	Heritage	Religion / Pilgrimage	Nature	Culture	Leisure	Education	Friend / Family Visit	No response	Other	TOTAL
Total respondents	843	796	508	377	242	181	75	72	22	1551

Q7/Q5	Nepal (excl GLA)	Nepal (GLA only)	India (excl BR and UP)	India (BR and UP only)	Other South Asia	Southeast Asia	East Asia	Other foreigners	UNK	TOTAL
Heritage	270	220	58	120	12	30	35	98	0	843
Religion	253	132	52	77	39	86	63	91	3	796
Both	141	75	24	42	12	25	14	40	0	373
TOTAL RESPONDENTS	467	333	111	189	41	94	98	214	4	1551

Q8/Q5	Nepal (excl GLA)	India (excl BR and UP)	Other South Asia	Southeast Asia	East Asia	Other Foreigners	Nepal (GLA)	India (BR and UP)	Nationality Unspecified	TOTAL VISITORS
Package tour	1291	554	1034	2174	688	247	78	200	0	6266
Independent	3169	747	206	93	221	371	1816	1258	33	7914
Unsp	220	0	3	0	2	0	0	0	0	225

Q9/Q5	Nepal (excl GLA)	India (excl BR and UP)	Other South Asia	Southeast Asia	East Asia	Other foreigners	Nepal (GLA only)	India (BR and UP only)	UNK	TOTAL VISITORS*
Local taxi	480	164	11	23	24	78	125	39	0	944
Private bus	1675	587	873	2057	581	202	358	312	0	6645
Rental car	188	57	28	55	131	110	130	39	6	744
Personal Car	748	221	4	0	2	3	385	354	25	1742
Public bus	1243	207	328	125	145	144	697	567	2	3458
Motorbike	151	24	0	0	0	9	441	140	0	765
Bicycle	19	12	0	8	8	60	44	11	0	162
Rickshaw	116	11	3	92	72	23	19	40	0	376
Other	184	46	4	24	66	69	23	52	0	468
Unsp	8	0	0	2	9	15	10	19	0	63
TOTAL VISITORS*	4812	1329	1251	2386	1038	713	2232	1573	33	15367
* multiple answers possible for this question										

Q10a/Q5	Nepal (excl GLA)	India (excl BR and UP)	Other South Asia	Southeast Asia	East Asia	Other foreigners	Nepal (GLA only)	India (BR and UP only)	UNK	TOTAL
Overnight stay	850	355	888	1602	677	541	64	164	23	5164
Full Day	1633	353	104	185	113	30	932	791	6	4147
Half Day	1675	559	234	435	115	19	897	361	4	4299
Less than 2hrs	319	32	20	12	0	26	133	139	0	681
TOTAL VISITORS	4477	1299	1246	2234	905	616	2026	1455	33	14291

Q10b/Q5	Nepal (excl GLA)	India (excl BR and UP)	Other South Asia	Southeast Asia	East Asia	Other foreigners	Nepal (GLA only)	India (BR and UP only)	UNK	TOTAL
> 2 nights	50	11	95	43	106	260	0	9	2	576
2 nights	274	41	470	252	157	169	2	74	21	1460
1 night	490	303	322	1257	388	109	56	81	0	3006
Overnight stay (unsp)	36	0	1	50	26	3	6	0	0	122
TOTAL VISITORS	850	355	888	1602	677	541	64	164	23	5164

Q10c/Q5	Nepal (excl GLA)	India (excl BR and UP)	Other South Asia	Southeast Asia	East Asia	Other foreigners	Nepal (GLA only)	India (BR and UP only)	UNK	TOTAL
Hotel/Guest House	745	280	369	507	523	331	62	83	21	2921
Family/Friend's home	35	3	0	0	0	0	6	6	0	50
Monastery	49	26	519	1072	98	198	0	2	2	1966
Other	4	41	0	0	1	0	0	0	0	46
UNSP	17	5	0	23	55	11	0	73	0	125
TOTAL PEOPLE	850	355	888	1602	677	540	68	164	23	5108

Q11/Q5	Nepal (excl GLA)	India (excl BR and UP)	Southeast Asia	Other South Asia	Other foreigners	East Asia	Nepal (GLA only)	India (BR and UP only)	UNK	TOTAL
First Visit	280	79	70	32	188	73	113	129	2	966
Previous visits	130	17	8	3	18	14	161	33	1	385
UNSP	57	15	16	6	8	11	59	27	1	200
TOTAL RESPONDENTS	467	111	94	41	214	98	333	189	4	1551

Q12/Q5	Nepal (excl GLA)	India (excl BR and UP)	Other South Asia	Southeast Asia	East Asia	Other foreigners	Nepal (GLA only)	India (BR and UP only)	UNK	TOTAL VISITORS
No other GLA sites	3799	1268	485	1498	699	577	1764	1339	33	11462
India	130	1301	628	2170	486	147	95	1458	27	5844
Kathmandu	1532	272	282	247	483	524	132	37	8	3517
Tilaurakot	677	31	712	733	172	31	241	118	0	2715
Chitwan National Park	1213	75	314	104	224	191	114	39	6	2280
Kudan	247	24	235	606	116	18	85	36	0	1367
Niglihawa	205	6	369	312	25	7	98	17	0	1039
Gotihawa	164	20	80	277	32	13	85	36	0	707
Ramagrama	152	2	140	168	79	15	143	0	0	699
Sisaniya	154	5	134	295	6	6	85	12	0	697
Devdaha	153	16	106	50	4	4	163	11	0	507
Araurakot	145	15	0	50	8	6	85	14	0	323
Sagrahawa	123	1	0	50	5	6	94	0	0	279
TOTAL VISITORS	4530	1301	1243	2267	911	617	2044	1458	33	14404

Average Spending Categories (in NPR per person per group)					
Q13/Q5	Nepal/India	Other Asian	Non-Asian	UNK	TOTAL
No/Very Low Spending (0-500NPR)	363	56	7	1	427
Low Spending (501-1000NPR)	210	14	15	1	240
Medium Spending (1001-2500NPR)	172	30	52	0	254
High Spending (2501-5000NPR)	46	26	47	0	119
Very High Spending (>5000NPR)	29	37	47	0	113
UNSP	281	70	44	2	397
TOTAL RESPONDETS	1101	233	212	4	1550

Appendix 15.2 : Regression Categorical Variables' Observations

Variable	Observations
V1_Types of groups	
Family/Friends	1011
Single/Couple	277
Organised tour groups	157
V3_Nationality	
Nepal/India	1102
Other Asian	233
Non-Asian	212
V6_Religion	
Buddhist	360
Hindu	821
Christian	72
Muslim	29
V7_Purpose of visit	
Tourism	1161
Pilgrimage	314
V8_Trip Organisation	
Independent	1328
Package	219
V10_Length of Stay	
Half-day	472
One day	509
One Night	250
> One Night	281
V12_Site Visited	
Lumbini only	833
Other Nepali sites	718

Variable	Observations
V17_Total Spending (Nepali rupees)	
No/Very low spending (0-500)	427
Low spending (501-1000)	240
Medium spending (1001-2500)	254
High spending (2500-5000)	119
Very high spending (> 5000)	113
V13_Accommodation Spending (Nepali rupees)	
No spending (0)	227
Very low spending (1-500)	127
Low spending (501-1500)	296
Medium spending (1501-3500)	157
High/Very high spending (> 3500)	225
V14_Transportation Spending (Nepali rupees)	
No spending (0)	559
Very low spending (1-100)	135
Low spending (101-300)	232
Medium spending (301-500)	137
High/Very high spending (> 500)	221
V15_Food and Drink Spending (Nepali rupees)	
No spending (0)	227
Very low spending (1-100)	127
Low spending (101-300)	296
Medium spending (301-500)	157
High/Very high spending (> 500)	225
V16_Souvenir/gift shopping spending (Nepali rupees)	
No spending (0)	629
Very low spending (1-100)	117
Low spending (101-300)	147
Medium spending (301-500)	88
High/Very high spending (> 500)	48

Appendix 15.3: Lumbini Visitor Surveys: Logistic Regression Summary Tables

*(NB: asterisks have been used to highlight the level of statistical significance of the results: ** signifies high level of statistical significance with a p-value < 0.01; and * signifies statistically significant results, with p-value < 0.05)*

Table 15.3.1: Ordinal Logistic Regression Model A: Determinants of Total Visitor Spending

ologit V17_Total_SpCateg i.V1_Group i.V3_Nat i.V6_Religion V7_Purp V8_Package i.V10_Lengthofstay V12_LumbiniOnly

Iteration 0: log likelihood = -1245.463
Iteration 1: log likelihood = -1032.2558
Iteration 2: log likelihood = -1014.8748
Iteration 3: log likelihood = -1014.5086
Iteration 4: log likelihood = -1014.5081
Iteration 5: log likelihood = -1014.5081

Number of obs = 848
LR chi2 (13) = 461.91
Prob > chi2 = 0.0000
Pseudo R2 = 0.1854

Log likelihood = -1014.5081

V17_Total_Spending	Coefficient	Std. Err.	z	P-Value	[95% Conf.	Interval]
V1_Types of Group						
Family/Friends	-	-	-	-	-	-
***Single/Couple*	.8080308	.2007939	4.02	0.000	.4144819	1.20158
***Organised Tour*	-1.778446	.4042189	-4.40	0.000	-2.570701	-.986192
V3_Nationality						
Nepal/India	-	-	-	-	-	-
Other Asia	.5375656	.3092435	1.74	0.082	-.0685406	1.143672
**Other Foreign*	.7469373	.3629227	2.06	0.040	.0356219	1.458253
V6_Religion						
Buddhist	-	-	-	-	-	-
Hindu	.1262625	.2422441	0.52	0.602	-.3485273	.6010522
Christian	.0475287	.3322177	0.14	0.886	-.603606	.6986634
Muslim	-.5326058	.500394	-1.06	0.287	-1.51336	.4481484
V7_Purpose of VIsit						
Pilgrimage	-.291256	.191515	-1.52	0.128	-.6666186	.0841066
V8_Trip Organisation						
**Package Tour*	.7439148	.3352556	2.22	0.026	.0868258	1.401004
V10_Length of stay						
Half-day	-	-	-	-	-	-
***One day*	1.099551	.17185	6.40	0.000	.7627313	1.436371
***One night*	2.531148	.2372149	10.67	0.000	2.066215	2.99608
***> One night*	3.179974	.288951	11.01	0.000	2.61364	3.746307
V12_Site Visited						
***Other Nepali sites*	.7932581	.1537662	5.16	0.000	.4918819	1.094634
/cut1	1.0133	.2690637			.4859444	1.540655
/cut2	2.373005	.2787153			1.826733	2.919277
/cut3	4.07766	.3052801			3.479322	4.675998
/cut4	5.253568	.3292142			4.60832	5.898816

Table 15.3.2: Ordinal Logistic Regression Model B: Determinant of length of stay in Lumbini

ologit V10_Lengthofstay i.V1_Group i.V3_Nat i.V6_Religion V7_Purp V8_Package V12_LumbiniOnly

Iteration 0: log likelihood = -1457.2929
Iteration 1: log likelihood = -1238.7744
Iteration 2: log likelihood = -1226.2093
Iteration 3: log likelihood = -1225.7105
Iteration 4: log likelihood = -1225.7098
Iteration 5: log likelihood = -1225.7098

Number of obs = 1,108
LR chi2(10) = 463.17
Prob > chi2 = 0.0000
Log likelihood = -1225.7098 Pseudo R2 = 0.1589

V10_Length of stay	Coefficient	Std. Err.	z	P-Value	[95% Conf.	Interval]
V1_Type of Group						
Family/Friends	-	-	-	-	-	-
Single/Couple	.2031169	.1798469	1.13	0.259	-.1493764	.5556103
Organised Tour	-.3035406	.2973823	-1.02	0.307	-.8863992	.279318
V3_Nationality						
Nepal/India	-	-	-	-	-	-
***Other Asia*	1.694989	.2684139	6.31	0.000	1.168907	2.22107
***Other Foreign*	2.80919	.3521573	7.98	0.000	2.118974	3.499406
V6_Religion						
Buddhist	-	-	-	-	-	-
***Hindu*	-.9386942	.2124736	-4.42	0.000	-1.355135	-.5222536
Christian	-.0742649	.3525215	-0.21	0.833	-.7651943	.6166644
***Muslim*	-1.58944	.4265742	-3.73	0.000	-2.42551	-.7533695
V7_Purpose of VIsit						
Pilgrimage	-.0489884	.1479057	-0.33	0.740	-.3388783	.2409015
V8_Trip Organisation						
Package Tour	-.2144518	.2642828	-0.81	0.417	-.7324366	.3035331
V12_Site Visited						
***Other Nepali sites*	.5709992	.1247118	4.58	0.000	.3265686	.8154299
/cut1	-1.126747	.2179251		-1.553873	-.6996218	
/cut2	.8943563	.2164645		.4700937	1.318619	
/cut3	2.395375	.2347312		1.935311	2.85544	

Table 15.3.3: Ordinal Logistic Regression Model C: Determinant of accommodation spending

ologit V13_Accom_SpCateg i.V1_Group i.V3_Nat V7_Purp V8_Package V12_LumbiniOnly

Iteration 0: log likelihood = -1079.4844
Iteration 1: log likelihood = -894.21385
Iteration 2: log likelihood = -844.17588
Iteration 3: log likelihood = -842.84265
Iteration 4: log likelihood = -842.84023
Iteration 5: log likelihood = -842.84023

Log likelihood = -842.84023

Number of obs = 1,229
LR chi2(7) = 473.29
Prob > chi2 = 0.0000
Pseudo R2 = 0.2192

V13_Accommodation Spending	Coefficient	Std. Err.	z	P-value	[95% Conf.	Interval]
V1_Type of Group						
Family/Friends	-	-	-	-	--	-
Single/Couple	.1724938	.2009407	0.86	0.391	-.2213427	.5663302
Organised Tour	-.7704133	.3969671	-1.94	0.052	-1.548454	.0076279
V3_Nationality						
Nepal/India	-	-	-	-	-	-
***Other Asia*	1.919352	.2399415	8.00	0.000	1.449075	2.389628
***Other Foreign*	2.532294	.220586	11.48	0.000	2.099953	2.964634
V7_Purpose of VIsit						
Pilgrimage	-.1059197	.2018027	-0.52	0.600	-.5014457	.2896064
V8_Trip Organisation						
Package Tour	.5397801	.3318572	1.63	0.104	-.110648	1.190208
V12_Site Visited						
***Other Nepali sites*	1.556256	.1869464	8.32	0.000	1.189848	1.922664
/cut1	2.916119	.1672638		2.588288	3.243951	
/cut2	3.575245	.1812646		3.219973	3.930517	
/cut3	4.542958	.2037414		4.143632	4.942284	
/cut4	5.399186	.2282575		4.95181	5.846563	

Table 15.3.4: Ordinal Logistic Regression Model D: Determinant of transportation spending

ologit V14_Transp_SpCateg i.V1_Group i.V11_accom_type i.V3_Nat V7_Purp V8_Package V12_LumbiniOnly

Iteration 0: log likelihood = -1638.5329
Iteration 1: log likelihood = -1550.9187
Iteration 2: log likelihood = -1550.2501
Iteration 3: log likelihood = -1550.2497
Iteration 4: log likelihood = -1550.2497

Number of obs = 1,113
LR chi2(9) = 176.57
Prob > chi2 = 0.0000
Log likelihood = -1550.2497 Pseudo R2 = 0.0539

V14_Transportation Spending	Coefficient	Std. Err.	z	P-Value	[95% Conf.	Interval]
V1_Type of Group						
Family/Friends						
Single/Couple	.1465732	.1684622	0.87	0.384	-.1836066	.4767531
Organised Tour	-.266964	.3438583	-0.78	0.438	-.940914	.406986
V11_Accomodation Type						
No overnight stay	-	-	-	-	-	-
Hotel/GH	.7378881	.276207	2.67	0.008	.1965322	1.279244
Monastery	.8112145	.1717676	4.72	0.000	.4745562	1.147873
V3_Nationality						
Nepal/India	-	-	-	-	-	-
Other Asia	-.4053991	.2360939	-1.72	0.086	-.8681347	.0573364
**Other Foreign*	-.4466144	.2240588	-1.99	0.046	-.8857616	-.0074673
V7_Purpose of VIsit						
***Pilgrimage*	-1.103567	.1776284	-6.21	0.000	-1.451712	-.7554218
V8_Trip Organisation						
***Package Tour*	-1.368709	.3042214	-4.50	0.000	-1.964972	-.7724458
V12_Site Visited						
***Other Nepali sites*	.1878216	.1312958	1.43	0.153	-.0695135	.4451567
/cut1	-.5170542	.087034		-.6876378	-.3464707	
/cut2	-.0192334	.0847106		-.1852632	.1467963	
/cut3	.8705461	.0893314		.6954597	1.045632	
/cut4	1.580438	.1011842		1.38212	1.778755	

Table 15.3.5: Ordinal Logistic Regression Model E: Determinant of food/drink spending

ologit V15_FD_SpCateg i.V1_Group i.V11_accom_type i.V3_Nat V7_Purp V8_Package V12_LumbiniOnly

Iteration 0: log likelihood = -1421.7485
Iteration 1: log likelihood = -1230.1819
Iteration 2: log likelihood = -1225.5488
Iteration 3: log likelihood = -1225.521
Iteration 4: log likelihood = -1225.521

Number of obs = 906
LR chi2(9) = 392.45
Prob > chi2 = 0.0000
Log likelihood = -1225.521 Pseudo R2 = 0.1380

V15_Food & Drink spending	Coefficient	Std. Err.	z	P-Value	[95% Conf.	Interval]
V1_Type of Group						
Family/Friends	-	-	-	-	-	-
***Single/Couple*	.6958493	.1898078	3.67	0.000	.3238328	1.067866
***Organised Tour*	-1.332342	.4285832	-3.11	0.002	-2.17235	-.4923346
V11_Accomodation Type						
No overnight stay	-	-	-	-	-	-
Hotel/GH	.3712774	.3149408	1.18	0.238	-.2459952	.98855
Monastery	1.82208	.1991201	9.15	0.000	1.431811	2.212348
V3_Nationality						
Nepal/India	-	-	-	-	-	-
Other Asia	-.1068449	.2732585	-0.39	0.696	-.6424216	.4287318
Other Foreign	.4540964	.2518289	1.80	0.071	-.0394792	.9476721
V7_Purpose of VIsit						
***Pilgrimage*	-1.497528	.2283601	-6.56	0.000	-1.945105	-1.04995
V8_Trip Organisation						
**Package Tour*	-.8290799	.3765357	-2.20	0.028	-1.567076	-.0910835
V12_Site Visited						
**Other Nepali sites*	.303597	.1495546	2.03	0.042	.0104753	.5967188
/cut1	-1.277841	.1076325		-1.488797	-1.066885	
/cut2	-.4801076	.093542		-.6634465	-.2967687	
/cut3	1.070714	.1018175		.8711554	1.270273	
/cut4	2.148492	.1266129		1.900336	2.396649	

Table 15.3.5: Ordinal Logistic Regression Model F: Determinant of souvenir/gift/shopping spending

ologit V16_Shop_SpCateg i.V1_Group i.V11_accom_type i.V3_Nat V7_Purp V8_Package V12_LumbiniOnly

Iteration 0: log likelihood = -1053.9457
Iteration 1: log likelihood = -1034.5368
Iteration 2: log likelihood = -1034.3084
Iteration 2: log likelihood = -1034.3084

Number of obs = 905
LR chi2(9) = 39.27
Prob > chi2 = 0.0000
Log likelihood = -1034.3083 *Pseudo R2 = 0.0186*

V16_Shopping Spending	Coefficient	Std. Err.	z	P-Value	[95% Conf.	Interval]
V1_Type of Group						
Family/Friends	-	-	-	-	-	-
Single/Couple	-.0465691	.2164457	-0.22	0.830	-.4707949	.3776566
Organised Tour	.0306988	.4454807	0.07	0.945	-.8424273	.9038249
V11_Accomodation Type						
No overnight stay	-	-	-	-	-	-
Hotel/GH	-.0769761	.3573002	-0.22	0.829	-.7772716	.6233194
Monastery	-.0369228	.2040387	-0.18	0.856	-.4368313	.3629858
V3_Nationality						
Nepal/India	-	-	-	-	-	-
Other Asia	-.5335975	.2924415	-1.82	0.068	-1.106772	.0395774
**Other Foreign*	-.7387775	.2831147	-2.61	0.009	-1.293672	-.1838828
V7_Purpose of VIsit						
***Pilgrimage*	-.7829561	.2685143	-2.92	0.004	-1.309235	-.2566777
V8_Trip Organisation						
Package Tour	-.2420799	.4061603	-0.60	0.551	-1.038139	.5539796
V12_Site Visited						
Other Nepali sites	.2761484	.1586394	1.74	0.082	-.0347791	.5870758
/cut1	.3087412	.096207		.1201789	.4973034	
/cut2	.8253675	.0992507		.6308397	1.019895	
/cut3	1.750413	.1185136		1.51813	1.982695	
/cut4	2.883328	.1720527		2.546111	3.220545	

APPENDIX 16: Business survey results

Appendix 16.1 : Descriptive Statistics Summary Tables

Q2_Location	Mahilwar	Lankapur	Tenuhawa	Parsa	Lumbini Cultural Zone	Total
Number	57	3	2	8	35	105

Q4_Type of business	Hotel	Restaurant	Shop	Other	Total
Number	50	17	33	5	105

Q6_Training program	Yes	No	Total
Number	26	79	105
Proportion	25%	75%	100%

Q7_Financial support	Yes	No	Total
Number	4	101	105
Proportion	4%	96%	100%

Q8_Hotel capacity	Types of accommodation	Number of rooms	Number of beds	Average annual occupancy rate	Minimum annual occupancy rate	Maximum annual occupancy rate
Total	49	924	2032	36%	5%	64%
Low budget accommodation (min: 400-1000NPR)	27	309	661	38%	8%	64%
Middle budget accommodation (min: 1100-2500NPR)	15	307	679	35%	5%	60%
High budget accommodation (min: over 2500)	7	308	692	31%	15%	50%

Q5_Opening Year	Other tourism businesses	Hotel/GH
1987	0	1
1988	0	1
1989	0	1
1990	0	1
1991	0	1
1992	0	1
1993	0	2
1995	0	2
1996	0	2
1997	4	2
1998	4	2
1999	4	3
2000	4	5
2001	5	7
2002	6	7
2003	8	9
2004	8	9
2005	8	9
2006	9	10
2007	11	10
2008	11	11
2009	12	13
2010	14	15
2011	19	18
2012	21	24
2013	27	26
2014	35	35
2015	42	38
2016	45	42
2017	52	50

Q13_Business owners by gender	Women	Men	Joint ownership	UNSP/Other
Hotel/GH	0	47	1	2
Restaurant	2	15	0	0
Other	4	35	0	0
Grand Total	6	96	1	2

Q14_Birthplace of owners	All Hotels	Low budget accommodation	Star Hotels	Restaurant	Shop	Travel Agency	Other	TOTAL
Lumbini Cultural Municipality	13	12	1	6	26	1	2	48
Greater Lumbini Area	4	0	3	1	1	1	0	7
Kathmandu Valley	15	4	11	2	0	0	0	17
Nepal Other	15	10	5	8	5	1	0	29
Other/UNSP	3	0	3	0	1	0	0	4
TOTAL	50	26	23	17	33	3	2	105

Q2/Q15_Type of business by caste/ethnic group of owners	Hotel	Restaurant	Shop	Travel Agency	Other	TOTAL
Tarai Brahmin	2	1	3	0	0	6
Tarai Dalit	1	0	4	1	1	7
Tharu	1	3	1	1	0	6
Other Tarai caste/ethnic group	5	0	14	0	1	20
Chhetri	3	4	8	0	0	15
Hill Brahmin	23	5	1	1	0	30
Newar	9	2	0	0	0	11
Other Hill ethnic/caste groups	1	2	0	0	0	4
Muslim	0	0	1	0	0	1
Foreigner	2	0	0	0	0	2
Other	3	0	0	0	0	3
Total	50	17	32	3	2	104

Q15_Employee (Gender) by type of business	Male	Female	UNSP	Total
Hotel/Guest House	352	129	20	501
Other businesses	49	9	8	66
TOTAL	401	138	28	567

Q15_Employee Caste/Ethnic group by type of business	Hotel	Restaurant	Other	TOTAL
Tharu	37	11	3	51
Tarai Brahmin	5	0	0	5
Tarai Dalit	75	3	6	84
Muslim	22	1	0	23
Other Tarai caste/ethnic group	29	5	0	34
Hill Brahmin	137	11	0	148
Newar	16	1	0	17
Hill Dalit	14	1	0	15
Other Hill caste/ethnic group	35	8	0	43
Chhetri	66	16	3	85
Foreigners	7	0	0	7
Other/UNSP	50	5	0	55
Total employees	493	62	12	567

Q2/Q15_Caste/ethnic group of owner by employees caste/ethnic groups	Tharu employees	Muslim employees	Hill Brahmin employees	Other Hill caste/ethnic groups	Tarai Brahmin employees	Newar employees	Hill Dalit employees	Chhetri employees	Tarai Dalit employees	Foreigners employees	Other Tarai caste/ethnic	Other/unsp employees	Total employees
Chhetri	2	0	4	7	0	0	0	13	8	0	4	5	43
Foreigner	3	3	1	5	0	0	0	7	14	5	0	12	50
Hill Brahmin	13	12	51	16	4	0	0	31	19	0	6	7	159
Other Hill caste/ethnic groups	1	2	3	2	0	0	0	0	0	0	4	0	12
Newar	9	5	46	6	0	9	0	20	22	0	3	19	139
Other	7	1	50	6	0	8	3	7	3	2	1	12	100
Other Tarai caste/ethnic group	3	0	2	0	0	0	0	0	10	0	10	0	25
Tarai Brahmin	0	0	3	1	1	0	0	5	5	0	5	0	20
Tarai Dalit	1	0	0	0	0	0	0	0	3	0	0	0	4
Tharu	12	0	0	0	0	0	0	2	0	0	1	0	15
Total	51	23	160	43	5	17	3	85	84	7	34	55	567

Q16/Q17a_Respondents'position by gender	Female	Male	TOTAL
Owner	6	55	61
Owner's relative	4	5	9
Manager	5	15	20
Receptionist	2	8	10
Other employees	0	5	5
TOTAL	17	88	105

Q17b_Respondents' age range	18-25	26-35	36-45	46-55	56-65	>65	TOTAL
Number	29	31	29	11	3	2	105
Proportion	28%	30%	28%	10%	3%	2%	100%

Q17c_Respondents' nationality	Nepal	Other	TOTAL
Number	103	2	105

Q17d/Q17a_Respondents' caste/ethnic group by gender	Female	Male	TOTAL
Tarai Brahmin	0	5	5
Tarai Dalit	1	5	6
Tharu	1	6	7
Other Tarai caste/ethnic group	0	21	21
Chhetri	3	12	15
Hill Brahmin	5	28	33
Newar	1	6	7
Other Hill ethnic/caste groups	4	4	8
Musalman	1	0	1
Foreigner	1	1	2
Total	17	88	105

Q17e_Respondents' religion	Hindu	Buddhist	Hindu/Buddhist	Muslim	Christian	Other	TOTAL
Number	89	6	7	1	1	1	105

Q18_Respondents' main income	Income from business	Other income	Total
Number	71	34	105

Q18b_Other household income	Agriculture	Shop/Other family business	Hotel jobs	LDT	Oversea	Qualified jobs in Kathmandu
Number	21	9	3	1	1	2

Appendix 16.2 : Regression Variables: Categorical variables' observations and discrete variables' frequency tables

Variable	Observations
V1_Type of Business	
Small businesses	55
Hotel/Guest House	50
V2_Owner's caste/ethnic group by region	
Tarai	40
Hill	46
V3_Owner's caste/ethnic group by caste hierarchy	
Upper Caste	45
Other/Middle Castes	40
Marginalised	14
Foreigner/Other	4
V7_Presence of female employees	
No	64
Yes	41
V8_Share of Tarai employees	
0_None	56
1_1-33% workforce	16
2_33-74% workforce	14
3_75% or over	19
V9_Presence of Tharu employees	
No	82
Yes	23
V10_Presence of Dalit/ Low Caste employees	
No	77
Yes	28
V11_Presence of Muslim employees	
No	95
Yes	10

V12_TotalEmployees			
Number of Employees	Freq.	Percent	Cum.
0	37	35.24	35.24
1	7	6.67	41.90
2	12	11.43	53.33
3	8	7.62	60.95
4	5	4.76	65.71
5	4	3.81	69.52
6	5	4.76	74.29
7	5	4.76	79.05
8	5	4.76	83.81
10	2	1.90	85.71
11	1	0.95	86.67
12	1	0.95	87.62
13	1	0.95	88.57
14	1	0.95	89.52
15	1	0.95	90.48
16	2	1.90	92.38
18	1	0.95	93.33
19	1	0.95	94.29
20	1	0.95	95.24
24	1	0.95	96.19
34	1	0.95	97.14
35	1	0.95	98.10
40	1	0.95	99.05
60	1	0.95	100.00
Total	105	100.00	

V13_TotalHill			
Number of Employees	Freq.	Percent	Cum.
0	68	64.76	64.76
1	5	4.76	69.52
2	9	8.57	78.10
3	7	6.67	84.76
4	4	3.81	88.57
5	4	3.81	92.38
6	3	2.86	95.24
8	1	0.95	96.19
11	1	0.95	97.14
13	1	0.95	98.10
25	1	0.95	99.05
53	1	0.95	100.00
Total	105	100.00	

V14_TotalUpperCaste			
Number of Employees	Freq.	Percent	Cum.
0	61	58.10	58.10
1	8	7.62	65.71
2	8	7.62	73.33
3	6	5.71	79.05
4	7	6.67	85.71
5	6	5.71	91.43
6	2	1.90	93.33
7	3	2.86	96.19
8	1	0.95	97.14
12	1	0.95	98.10
35	1	0.95	99.05
50	1	0.95	100.00
Total	105	100.00	

Appendix 16.3 : Regressions Results: Summary Tables

*(NB: asterisks have been used to highlight the level of statistical significance of the results: ** signifies high level of statistical significance with a p-value < 0.01; and * signifies statistically significant results, with p-value < 0.05)*

Table 16.3.1: Logistic regression Model 1: Determinants of Type of Business Ownership

. logit V1_Typeofbusiness V2_OwnerHill i.V3_OwnerCaste_Categ

Iteration 0: log likelihood = -58.224363
Iteration 1: log likelihood = -44.461962
Iteration 2: log likelihood = -44.430645
Iteration 3: log likelihood = -44.430538
Iteration 4: log likelihood = -44.430538

Log likelihood = -44.430538

Number of obs = 84
LR chi2(3) = 27.59
Prob > chi2 = 0.0000
Pseudo R2 = 0.2369

V1_Type of business	Coefficient	Std. Err.	z	P-Value	[95% Conf.	Interval]
V2_Owner's Region						
**Hill*	1.45144	.6859239	2.12	0.034	.1070543	2.795826
V3_Owner Caste/Ethnic group						
Upper Castes	-	-	-	-	-	-
Other Caste/Ethnic group	-1.090899	.6932624	-1.57	0.116	-2.449668	.2678705
Marginalised groups	-1.588674	1.010406	-1.57	0.116	-3.569034	.3916851
_cons	-.2030852	.6615036	-0.31	0.759	-1.499608	1.093438

Table 16.3.2: Logistic Regression Model 2: Determinants of Women Employment

. logit V7_EmployeeGender V1_Typeofbusiness V2_OwnerHill i.V3_OwnerCaste_Categ

Iteration 0: log likelihood = -56.280754
Iteration 1: log likelihood = -41.105623
Iteration 2: log likelihood = -40.414863
Iteration 3: log likelihood = -40.408376
Iteration 4: log likelihood = -40.408373

Number of obs = 84
LR chi2(4) = 31.74
Prob > chi2 = 0.0000
Log likelihood = -40.408373 Pseudo R2 = 0.2820

V7_Female Employees	Coefficient	Std. Err.	z	P-Value	[95% Conf.	Interval]
V1_Type of business						
***Hotel/GH*	2.035005	.6554943	3.10	0.002	.7502601	3.319751
V2_Owner's Region						
Hill	1.169821	.8899092	1.31	0.189	-.5743686	2.914011
V3_Owner Caste/Ethnic group						
Upper Castes	-	-	-	-	-	-
Other Caste/Ethnic group	-1.043235	.8955736	-1.16	0.244	-2.798527	.7120571
Marginalised groups	.9449497	1.120226	0.84	0.399	-1.250653	3.140553
_cons	-2.213329	.9687553	-2.28	0.022	-4.112054	-.3146031

Table 16.3.3: Logistic Regression Model 3: Determinants of Tharu Employment

. logit V9_EmployeeTharu V1_Typeofbusiness V2_OwnerHill i.V3_OwnerCaste_Categ

Iteration 0: log likelihood = -43.644706
Iteration 1: log likelihood = -37.610711
Iteration 2: log likelihood = -36.732914
Iteration 3: log likelihood = -36.707653
Iteration 4: log likelihood = -36.707575
Iteration 5: log likelihood = -36.707575

Log likelihood = -36.707575

Number of obs = 84
LR chi2(4) = 13.87
Prob > chi2 = 0.0077
Pseudo R2 = 0.1589

V9_Tharu Employee	Coefficient	Std. Err.	z	P-Value	[95% Conf.	Interval]
V1_Type of business						
Hotel/GH	1.504757	.8636324	1.74	0.081	-.1879314	3.197446
V2_Owner's Region						
Hill	1.841733	1.333721	1.38	0.167	-.7723124	4.455778
V3_Owner Caste/Ethnic group						
Upper Castes	-	-	-	-	-	-
Other Caste/Ethnic group	.4612399	1.099335	0.42	0.675	-1.693416	2.615896
**Marginalised groups*	3.720493	1.580946	2.35	0.019	.6218958	6.81909
_cons	-4.218773	1.525114	-2.77	0.006	-7.207942	-1.229604

Table 16.3.4a: Ordinal Logistic Regression Model 4a: Determinants of Tarai Group Employment

. ologit V8_TaraiWorkforce V1_Typeofbusiness i.V3_OwnerCaste_Categ

Iteration 0: log likelihood = -122.36314
Iteration 1: log likelihood = -107.98467
Iteration 2: log likelihood = -107.58982
Iteration 3: log likelihood = -107.58931
Iteration 4: log likelihood = -107.58931

Log likelihood = -107.58931

Number of obs = 103
LR chi2(4) = 29.55
Prob > chi2 = 0.0000
Pseudo R2 = 0.1207

V8_Share of Tarai Employees	Coefficient	Std. Err.	z	P-Value	[95% Conf.	Interval]
V1_Type of business						
***Hotel/GH*	2.612268	.603748	4.33	0.000	1.428944	3.795592
V3_Owner Caste/Ethnic group						
Upper Castes	-	-	-	-	-	-
Other Caste/Ethnic group	.6226078	.5796722	1.07	0.283	-.5135288	1.758744
***Marginalised groups*	2.425703	.7967372	3.04	0.002	.8641271	3.98728
Foreign	.0988445	.7856709	0.13	0.900	-1.441042	1.638731
/cut1	2.101139	.6021425			.9209609	3.281316
/cut2	2.906521	.6294486			1.672824	4.140217
/cut3	3.80448	.6785412			2.474563	5.134396

Table 16.3.4b: Ordinal Logistic Regression Model 4b: Determinants of Tarai Group Employment

. ologit V8_TaraiWorkforce V1_Typeofbusiness V2_OwnerHill

Iteration 0: log likelihood = -104.82164
Iteration 1: log likelihood = -96.925181
Iteration 2: log likelihood = -96.784634
Iteration 3: log likelihood = -96.784349
Iteration 4: log likelihood = -96.784349

Number of obs = 86
LR chi2(2) = 16.07
Prob > chi2 = 0.0003
Log likelihood = -96.784349 Pseudo R2 = 0.0767

V8_Share of Tarai employees	Coefficient	Std. Err.	z	P-Value	[95% Conf.	Interval]
V1_Type of business						
***Hotel/GH*	2.119351	.581887	3.64	0.000	.9788732	3.259828
V2_Owner's Region						
**Hill*	-1.395501	.5606757	-2.49	0.013	-2.494405	-.2965963
/cut1	.4023108	.3733796			-.3294998	1.134121
/cut2	1.037298	.398924			.255421	1.819174
/cut3	1.909281	.4285564			1.069326	2.749236

Table 16.3.5: Negative Binomial Regression Model 5: Determinants of Hill Group Employment

. nbreg V13_TotalHill V1_Typeofbusiness V2_OwnerHill i.V3_OwnerCaste_Categ

Fitting Poisson model:
Iteration 0: log likelihood = -147.60919
Iteration 1: log likelihood = -145.60808
Iteration 2: log likelihood = -145.30779
Iteration 3: log likelihood = -145.22219
Iteration 4: log likelihood = -145.20702
Iteration 5: log likelihood = -145.20348
Iteration 6: log likelihood = -145.20264
Iteration 7: log likelihood = -145.20246
Iteration 8: log likelihood = -145.20243
Iteration 9: log likelihood = -145.20242

Fitting constant-only model:
Iteration 0: log likelihood = -141.8417
Iteration 1: log likelihood = -127.85387
Iteration 2: log likelihood = -125.53759
Iteration 3: log likelihood = -125.51872
Iteration 4: log likelihood = -125.51872

Fitting full model:
Iteration 0: log likelihood = -125.51872 (not concave)
Iteration 1: log likelihood = -110.11752
Iteration 2: log likelihood = -103.7902
Iteration 3: log likelihood = -102.91144
Iteration 4: log likelihood = -102.84983
Iteration 5: log likelihood = -102.8366
Iteration 6: log likelihood = -102.8336
Iteration 7: log likelihood = -102.83313
Iteration 8: log likelihood = -102.83307
Iteration 9: log likelihood = -102.83306
Iteration 10: log likelihood = -102.83306

Dispersion = mean
Log likelihood = -102.83306

Number of obs = 84
LR chi2(4) = 45.37
Prob > chi2 = 0.0000
Pseudo R2 = 0.1807

V13_TotalHill	Coef.	Std. Err.	z	P-Value	[95% Conf.	Interval]
V1_Type of business						
**Hotel/GH*	1.073992	.5014388	2.14	0.032	.0911903	2.056794
V2_Owner's Region						
***Hill*	2.243723	.7013313	3.20	0.001	.8691394	3.618308
V3_Owner Caste/Ethnic group						
Upper Castes	-	-	-	-	-	-
Other Caste/Ethnic group	-.5319167	.6871941	-0.77	0.439	-1.878792	.8149589
Marginalised groups	-15.13556	1272.426	-0.01	0.991	-2509.044	2478.773
_cons	-2.044036	.8392117	-2.44	0.015	-3.688861	-.399211
/lnalpha	.3981605	.3167063			-.2225725	1.018894
alpha	1.489083	.471602			.8004569	2.770128

LR test of alpha=0 : chibar2(01) = 84.74 Prob >= chibar2 = 0.000

Table 16.3.6: Negative Binomial Regression Model 6: Determinants of Upper Castes Group Employment

. nbreg V14_TotalUpperCaste V1_Typeofbusiness V2_OwnerHill i.V3_OwnerCaste_Categ

Fitting Poisson model:

Iteration 0: log likelihood = -176.11192
Iteration 1: log likelihood = -175.20859
Iteration 2: log likelihood = -175.19948
Iteration 3: log likelihood = -175.19948

Fitting constant-only model:

Iteration 0: log likelihood = -155.38719
Iteration 1: log likelihood = -139.36036
Iteration 2: log likelihood = -138.43151
Iteration 3: log likelihood = -138.42945
Iteration 4: log likelihood = -138.42945

Fitting full model:

Iteration 0: log likelihood = -129.03285
Iteration 1: log likelihood = -120.48553
Iteration 2: log likelihood = -118.1734
Iteration 3: log likelihood = -117.9789
Iteration 4: log likelihood = -117.97836
Iteration 5: log likelihood = -117.97836

Number of obs = 84
LR chi2(4) = 40.90
Prob > chi2 = 0.0000
Pseudo R2 = 0.1477

Dispersion = mean
Log likelihood = -117.97836

V14_TotalUpperCaste	Coefficient	Std. Err.	z	P-Value	[95% Conf.	Interval]
V1_Type of business						
**Hotel/GH*	.9640739	.4506926	2.14	0.032	.0807328	1.847415
V2_Owner's Region						
**Hill*	1.298913	.5667747	2.29	0.022	.188055	2.409771
V3_Owner Caste/Ethnic group						
Upper Castes	-	-	-	-	-	-
**Other Caste/Ethnic group*	-1.614388	.6615873	-2.44	0.015	-2.911075	-.3177005
Marginalised groups	-1.300183	1.00181	-1.30	0.194	-3.263694	.6633276
_cons	-.7911709	.6616143	-1.20	0.232	-2.087911	.5055693
/lnalpha	.394207	.3028746			-.1994164	.9878303
alpha	1.483208	.4492259			.8192087	2.685402

LR test of alpha=0: chibar2(01) = 114.44 Prob >= chibar2 = 0.000

APPENDIX 17: Panditarama Vipassana Meditation Centre Visitor Data

	Nationality of Yogi per year based on Panditarama Vipassana Meditation Centre Visitor Data (2005-2016)												
	2005	**2006**	**2007**	**2008**	**2009**	**2010**	**2011**	**2012**	**2013**	**2014**	**2015**	**2016**	**Total (per nat.)**
TOTAL (per year)	**122**	**89**	**170**	**139**	**199**	**200**	**196**	**234**	**194**	**250**	**162**	**169**	**2124**
USA	15	11	11	19	21	24	21	24	39	37	25	30	277
Nepal	11	10	28	11	41	27	23	36	28	37	8	8	268
Germany	10	7	11	9	14	12	13	21	11	19	16	14	157
Australia	4	2	5	11	8	16	13	10	7	15	13	16	120
Canada	4	8	11	11	7	6	16	7	10	9	7	8	104
France	7	7	9	8	13	7	11	7	6	9	8	6	98
United Kingdom	6	4	3	8	10	17	9	6	9	9	6	7	94
Israel	15	9	10	4	7	12	4	9	2	9	4	8	93
Netherlands	2	1	1	6	3	10	15	9	9	11	6	11	84
Switzerland	7	6	8	6	4	11	5	4	7	5	5	7	75
Malaysia	0	0	1	5	6	4	4	27	3	12	3	4	69
India	1	3	1	0	3	11	8	6	3	15	5	7	63
Italy	8	3	6	3	10	2	6	4	3	5	4	6	60
Spain	7	2	3	5	3	3	5	5	9	6	8	1	57
Austria	8	2	11	1	3	2	1	4	4	4	5	6	51
Korea	3	0	12	3	5	2	5	2	7	0	2	0	41
Belgium	2	3	4	3	8	5	2	1	1	1	1	2	33
Russia	0	0	0	2	1	1	1	3	5	12	7	1	33
China	0	2	4	1	3	1	2	3	5	5	4	1	31
Japan	3	0	6	5	5	3	3	2	0	0	1	0	28
Sweden	1	1	3	3	2	1	3	4	2	1	0	5	26
Czech Rep.	0	0	0	0	2	4	2	5	1	4	1	1	20
Thailan	0	1	4	1	3	3	4	1	1	1	1	0	20
Brazil	0	1	0	2	0	1	2	2	5	1	2	2	18
Denmark	1	0	1	0	2	0	4	4	0	2	1	3	18
Ireland	0	2	0	0	2	2	3	1	3	0	1	1	15
Greece	0	0	0	0	2	4	1	3	2	1	1	0	14
Mexico	0	0	2	0	0	3	0	2	0	2	1	1	11
Poland	2	0	1	0	1	0	1	1	1	1	1	1	10
Hungary	2	1	0	0	2	0	0	0	0	0	2	2	9
New Zealand	0	1	0	1	0	3	0	1	2	0	1	0	9
Vietnam	0	0	4	1	0	0	0	0	0	3	0	0	8
Argentina	0	0	0	0	2	0	1	4	0	0	0	0	7
Ukraine	0	0	0	1	0	1	1	1	0	2	1	0	7
Finland	0	2	0	0	0	0	0	0	2	2	0	0	6

Singapore	2	0	1	2	0	0	0	1	0	0	0	0	6
Taiwan	0	0	2	0	1	0	0	2	0	1	0	0	6
Luxembourg	0	0	0	0	2	0	0	0	0	0	1	0	5
Turkey	0	0	0	1	0	0	0	0	0	0	3	1	5
Belarusia	0	0	0	0	0	0	0	3	0	1	0	0	4
Estonia	0	0	1	0	0	0	1	1	0	0	0	1	4
Indonesia	0	0	0	0	1	0	0	0	2	0	0	1	4
Myanmar	0	0	1	2	0	0	0	0	0	0	0	1	4
South Africa	0	0	3	0	0	0	1	0	0	0	0	0	4
Sri Lanka	0	0	0	1	0	0	0	0	1	0	1	1	4
Colombia	0	0	0	0	0	1	1	1	0	0	0	0	3
Ltvia	0	0	0	0	0	0	0	1	0	0	1	1	3
Peru	0	0	0	0	0	0	1	0	0	2	0	0	3
Portugal	0	0	0	0	0	0	2	0	0	0	1	0	3
Slovakia	0	0	0	0	1	0	0	0	2	0	0	0	3
Bangladesh	0	0	0	0	0	0	0	0	0	1	1	0	2
Bulgaria	0	0	0	0	1	0	0	0	0	1	0	0	2
Cyprus	1	0	0	1	0	0	0	0	0	0	0	0	2
Lithuania	0	0	0	0	0	0	0	1	0	1	0	0	2
Moldavia	0	0	0	0	0	0	0	0	0	0	2	0	2
Norway	0	0	0	0	0	0	1	0	0	1	0	0	2
Pakistan	0	0	0	0	0	0	0	0	0	0	1	1	2
Romania	0	0	0	0	0	1	0	1	0	0	0	0	2
Slovenia	0	0	0	0	0	0	0	2	0	0	0	0	2
Bolivia	0	0	0	0	0	0	0	0	0	1	0	0	1
Chili	0	0	0	0	0	0	0	0	0	0	0	1	1
Ecuador	0	0	0	0	0	0	0	0	1	0	0	0	1
Ethiopia	0	0	1	0	0	0	0	0	0	0	0	0	1
Honduras	0	0	0	1	0	0	0	0	0	0	0	0	1
Iran	0	0	0	0	0	0	0	0	0	1	0	0	1
Jordan	0	0	0	1	0	0	0	0	0	0	0	0	1
Kuwait	0	0	0	0	0	0	0	0	0	0	0	1	1
Lebanon	0	0	1	0	0	0	0	0	0	0	0	0	1
Panama	0	0	0	0	0	0	0	1	0	0	0	0	1
Serbia	0	0	0	0	0	0	0	0	1	0	0	0	1
Uruguay	0	0	0	0	0	0	0	1	0	0	0	0	1
Venezuela	0	0	0	0	0	0	0	0	0	0	0	1	1

APPENDIX 18: Comparison of the management objectives between the Lumbini Development Act (1985) and the Integrated Management Plan (2013)

Integrated Management Framework (Weise 2013)	Lumbini Development Act (1985 amended in 2003)
Responsibilities of the Lumbini World Heritage Site Management: 1. To identify the attributes and elements that give Lumbini its outstanding universal value, including its authenticity and integrity. 2. To coordinate the implementation of the applicable legislation and the guidelines for the physical development of the Sacred Garden; 3. To monitor the archaeological remains within the Sacred Garden; 4. To monitor and manage the pilgrims and visitors within the Sacred Garden; 5. To carry out weekly monitoring and prepare weekly monitoring reports. 6. To review and revise the Plan of Action and prepare Annual Action Plans; 7. To carry out risk management and emergency response to disasters. 8. To coordinate with all relevant "actors" within the WH area and the Sacred Garden, in particular with the Department of Archaeology; 9. To maintain close communication with the World Heritage Centre and the UNESCO Office in Kathmandu; 10. To maintain a documentation centre including the maintenance of a database of all communications linked to World Heritage; 11. Prepare, coordinate and submit required reports to the World Heritage Centre as requested by the World Heritage Committee;	**Objectives of the Trust: Subject to the policy approved by His Majesty's Government the objectives of the Trust shall be as follows.** 1. To obtain or arrange for obtaining contribution of cash in-kind, or any other type of assistance for the plan form any sector within or outside the Kingdom of Nepal. 2. To collect or arrange for collecting contribution for the plan from within or outside the Kingdom of Nepal. 3. To establish direct contacts with individuals or institutions within or outside the Kingdom of Nepal for the purpose of obtaining assistance or collecting contributions for the Plan. 4. To make available funds for the plans approved after analysing work pans. 5. To depute a member or any other person to inspect whether or not funds allocated for specific programs as approved by the Board of Trustees have been properly utilized. 6. To introduce changes in the work plan if so deemed necessary in the interest of the Plan. 7. To constitute committees and sub-committees within or outside the Kingdom of Nepal as required for fulfilling the plan. 8. To evaluate the functions and operations of committees and sub-committees constituted under Clause (g). 9. To formulate policies for the committees and sub-committees constituted under Clause (g) and issue guidelines. 10. To maintain close and cooperative relations with His Majesty's Government. 11. To perform or arrange for the performance of other necessary functions in order to achieve the objectives of the Trust.